Müşteri Adı / Adresi: HERA Eğlence ve Mimari Aydınlatma Sistemleri A.Ş.
Client name / address: Güllübağlar Mahallesi Kahramanlar Caddesi No:3-1 34906 Pendik İstanbul / TÜRKİYE

İş Emri No: 210226-01
Work Order No:

Test Edilen Ürün: Chronopix RGBW (HERA P0102510505002050100)
Items tested: Chronopix RGBW (HERA P0102510505002050100)

Açıklamalar: DGC'ye TS EN 60598-2-1 standardı uyarınca testler uygulanmıştır. Detaylı Bilgi için 5. sayfaya bakınız.
Remarks: Test were applied to EUT according to TS EN 60598-2-1 standart. Check Page 5 for further information.

Numune Kabul Tarihi: 09.02.2021
The date of receipt of test item:

Deney Tarihi: 09.03.2021 - 22.03.2021
Date of test:

Yayımlandığı Tarih: 30.03.2021
Date of Publication:

Onay Tarihi : 30.03.2021
Date of Approval

Deney ve Kalibrasyon ELDAŞ MERKEZİ
Mühür / Seal

Rapor Sorumlusu
Person in Charge of Test
Hakan ÇOTA

Laboratuvar Müdürü
Head of Testing Laboratory
Oktay TOSUN

Türk Akreditasyon Kurumu (TÜRKAK) deney raporlarının tanınması konusunda Avrupa Akreditasyon Birliği (EA) ve Uluslararası Laboratuvar Akreditasyon Birliği (ILAC) ile karşılıklı tanınma antlaşmasını imzalamıştır.
The Turkish Accreditaton Acency (TÜRKAK) is signatory to the multilateral agreements of the Eropean cooperation for the Accreditation (EA) and of the International Laboratory Accreditation (ILAC) for the Mutual recognation of test reports.

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** Signed tests or the papers which have not the accreditation number are not in the scope of accreditation.*

Deney ve/veya ölçüm sonuçları, genişletilmiş ölçüm belirsizlikleri (olması halinde) ve deney metodları bu sertifikanın tamamlayıcı kısmı olan takip eden sayfalarda verilmiştir.
The test and/or measurement results, the uncertainties (if applicable) with confidence probability and test methods are given on the following pages which are part of this report.

Bu rapor: Firmamıza ulaşan numunelere deney ve/veya deneyler uygulanarak elde edilmiştir. Müşteriye ait diğer numuneleri kapsamaz.
This report was prepared after applying test/tests to the samples that are sent to our company.

Note that this report does not involve other samples of the customer.

Bu rapor laboratuvarın yazılı izni olmadan kısmen kopyalanıp çoğaltılamaz. İmzasız ve mühürsüz sertifikalar geçersizdir.
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ELDAŞ is ACCREDITED by TÜRKAK (TURKISH ACCREDITATION AGENCY)

Sonuç
Conclusion

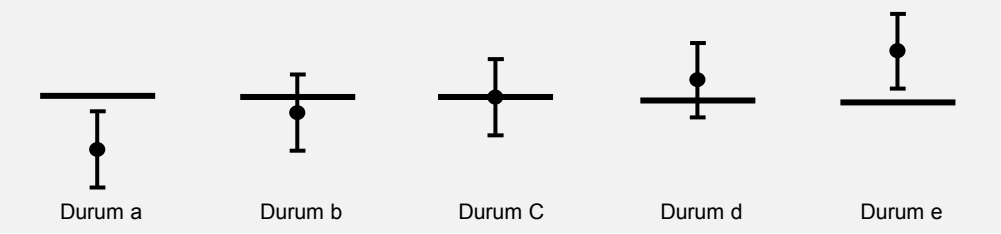
Bu bir LVD test raporudur.
Bu raporda verilen sonuçlar ve değerlendirmeler sadece üretici/başvuru sahibi tarafından test için sağlanan ürün/sistem ile ilgilidir. Üretilen diğer bütün modellerin bu raporda verilen gereksinimleri karşılaması üreticinin/başvuru sahibinin sorumluluğundadır.

This is a LVD test report.
The test results presented in this report relate only to the object/system tested. The results contained in this report reflect the results for this particular model and serial number. It is the responsibility of the manufacturer/applicant to ensure that all production models meet the intent of the requirements detailed within this report.

Doküman Tarihçesi
Revision History

Baskı / *Edition*	**Tarih** / *Date*	**Açıklama** / *Remarks*
İlk yayın / *First edition*	30.03.2021	---

Karar Kuralı Seçimi
Decision Rule Choisen



" ● " **Ölçüm Sonucu** */ Measurement Result*

" I " **Ölçüm Belirsizliği Aralığı** */ Measurement Uncertainty Range*

Durum a / *Situation a* ;
Üst sınırın altındadır bu sebeple ürün spesifikasyona uygundur. / *EUT results below the upper limit therefore results are OK* .

Durum b / *Situation b* ;
Üst sınırın altındadır fakat ölçülen sonuç, belirsizlik aralığının yarısından az bir pay ile üst sınırın altındadır; bu sebeple, uygunluk belirtmek mümkün değildir. Laboratuvar bu sınıra kendi ölçüm belirsizliği hesabına göre karar vererek müşteriye bilgilendirme sağlar. / *EUT results are below the upper limit line but below the upper limit line with a margin of less than half of the uncertainty; therefore it is not possible to state conformity. The laboratory decides this limit according to its own measurements of the uncertainty and informs the customer.*

Durum c / *Situation c* ;

Ölçülen sonuç sınırın tam üzerindedir, bu sebeple ile “uygun” ya da “uygun değil” diye belirtmek mümkün değildir. Müşteri ile görüşülerek ölçülen değerin limitinin altına indirilmesi sağlanmalıdır. / *Eut results are on the limit line therefore could not to say " pass" or "fail". In consultation with the customer, should be ensured that the measured value is reduced below the limit.*

Durum d / *Situation d* ;
Üst sınırın üstündedir bu sebeple ürün spesifikasyona uygun değildir. / *EUT results above the upper limit therefore results are does not OK* .

Durum e / *Situation e* ;
Üst sınırın üstündedir bu sebeple ürün spesifikasyona uygun değildir. / *EUT results above the upper limit therefore results are does not O*K.

İÇİNDEKİLER
Contents

Deney ve Kalibrasyon ELDAŞ MERKEZ

DENEYDEN GEÇİRİLEN CİHAZIN :

Equipment Under Test's

Markası *Brand*	:	HERA	**Beyan Gerilimi** *Rated Voltage*	:	48 VDC
Modeli *Model*	:	P0102510505002050100 P0102510505002050101 (Dome)	**Beyan Gücü** *Rated Power*	:	4,8 W (2pcs)
Seri No. *Serial Nu.*	:	14049-00001	**Beyan Akımı** *Rated Current*	:	0,1 A (2pcs)

Kısa Tanımı *Short Description* : **DMX512 kontrollü RGBW dış cephe aydınlatma ürünü.**
DMX512 RGBW facade lighting fixture.

Ürün Ailesi Tanımı (Product Family Definition) : **Ürüna ailesi sayfa 10'daki tabloda belirtlen farklılıklar doğrultusunda değişiklik göstermektedir.**
The product family varies according to the variables specified in the table(Page 10).

ÇEVRE ŞARTLARI

Environmental Conditions

Deneyler sırasında ölçülen çevre şartları ilgili sayfalarda belirtilmiştir.
The enviromental conditions are measured during tests, are determined related pages.

DENEY RAPORUNDA KULLANILAN SEMBOLLERİN TANIMLARI

Definations of Symbols Used in This Test Report

■ - **Siyah kutu, deney raporunda kullanılan cihaz, standard ve koşulları gösterir.**
The black square indicates that the listed condition, standard or equipment is applicable for this report.

□ - **Boş kutu, deney raporunda kullanılmayan cihaz, standard ve koşulları gösterir.**
The empty square indicates that the listed condition, standard or equipment is not applicable for this report.

DGC *EUT* - **Deneyden geçen cihaz**
Equipment under test

TEST REPORT
IEC 60598-2-1
Luminaires
Part 2: Particular requirements
Section 1: Fixed general-purpose luminaires

Report Number. .....:	**LVD21-028**
Date of issue .....:	**30.03.2021**
Total number of pages.....:	**48**
Name of Testing Laboratory preparing the Report.....:	**ELDAŞ Test ve Kalibrasyon Elektrik Sanayi Ticaret A.Ş.**
Applicant's name.....:	**HERA Eğlence ve Mimari Aydınlatma Sistemleri A.Ş.**
Address .....:	**Güllübağlar Mahallesi Kahramanlar Caddesi No:3-1 34906 Pendik İstanbul / TÜRKİYE**
Test specification:	
Standard.....:	IEC 60598-2-1:2020 used in conjunction with IEC 60598-1:2014, AMD1:2017
Test procedure .....:	LVD
Non-standard test method .....:	N/A
Test Report Form No.....:	IEC60598_2_1G
Test Report Form(s) Originator ....:	Intertek Semko AB
Master TRF.....:	Dated 2020-06-02

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

General disclaimer:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

Deney ve Kalibrasyon ELDAŞ MERKEZİ

Test item description ..... :	Chronopix RGBW
Trade Mark(s) ..... :	HERA
Manufacturer ..... :	HERA Eğlence ve Mimari Aydınlatma Sistemleri A.Ş.
Model/Type reference ..... :	P0102510505002050100
Ratings ..... :	48W DC, 0.1A (2pcs), 4,8W

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):

☒	**LVD Testing Laboratory:**	ELDAŞ Test ve Kalibrasyon Elektrik Sanayi Ticaret A.Ş.	
Testing location/ address.....:		Ahi Evran OSB Mah. Büyük Selçuklu Cad. No:2 Sincan Ankara/TÜRKİYE	
Tested by (name, function, signature).....:		Hakan ÇOTA	
Approved by (name, function, signature)...:		Ahmet CANBOLAT	
☐	**Testing procedure: CTF Stage 1:**		
Testing location/ address.....:			
Tested by (name, function, signature).....:			
Approved by (name, function, signature)...:			
☐	**Testing procedure: CTF Stage 2:**		
Testing location/ address.....:			
Tested by (name + signature).....:			
Witnessed by (name, function, signature) .:			
Approved by (name, function, signature)...:			
☐	**Testing procedure: CTF Stage 3:**		
☐	**Testing procedure: CTF Stage 4:**		
Testing location/ address.....:			
Tested by (name, function, signature).....:			
Witnessed by (name, function, signature) .:			
Approved by (name, function, signature)...:			
Supervised by (name, function, signature) :			

Deney ve Kalibrasyon ELDAŞ MERKEZİ

List of Attachments (including a total number of pages in each attachment):

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
Full test for all relevant clauses except the clauses with "—".	ELDAŞ Test ve Kalibrasyon Elektrik Sanayi Ticaret A.Ş. Ahi Evran OSB Mah. Büyük Selçuklu Cad. No:2 Sincan Ankara/TÜRKİYE

Summary of compliance with National Differences (List of countries addressed):

☐ **The product fulfils the requirements of _____ (insert standard number and edition and delete the text in parenthesis, leave it blank or delete the whole sentence, if not applicable**

Statement concerning the uncertainty of the measurement systems used for the tests
(may be required by the product standard or client)

☐ **Internal procedure used for type testing through which traceability of the measuring uncertainty has been established:**
Procedure number, issue date and title:

Calculations leading to the reported values are on file with the NCB and testing laboratory that conducted the testing.

☐ **Statement not required by the standard used for type testing**

(Note: When IEC or ISO standard requires a statement concerning the uncertainty of the measurement systems used for tests, this should be reported above. The informative text in parenthesis should be delete in both cases after selecting the applicable option)

Test item particulars.....:	
Classification of installation and use.....:	Class III
Supply Connection.....:	Type Z Attachment
.....:	
Possible test case verdicts:	
- test case does not apply to the test object.....:	N/A
- test object does meet the requirement.....:	P (Pass)
- test object does not meet the requirement.....:	F (Fail)
Testing.....:	
Date of receipt of test item .....:	05.03.2021
Date (s) of performance of tests.....:	09.03.2021 – 22.03.2021

General remarks:

"(See Enclosure #)" refers to additional information appended to the report.
"(See appended table)" refers to a table appended to the report.

Throughout this report a ☒ comma / ☐ point is used as the decimal separator.

Clause numbers between brackets refer to clauses in IEC 60598-1

Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:

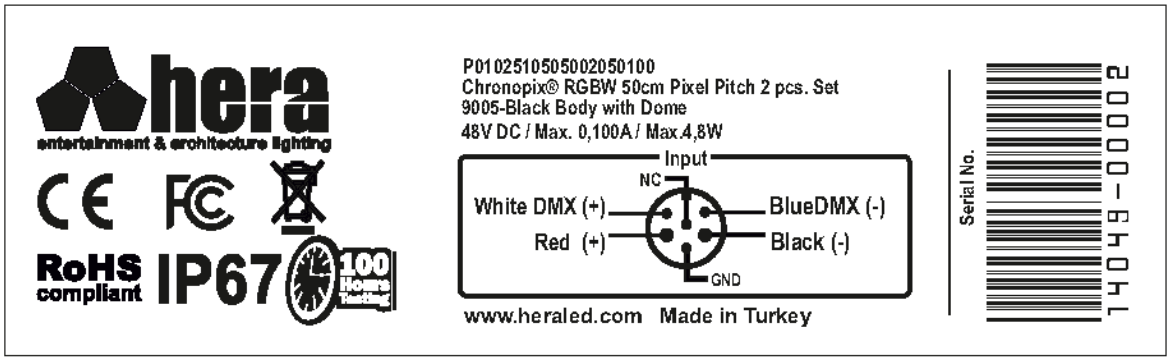
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided ..... :	☐ **Yes** ☒ **Not applicable**

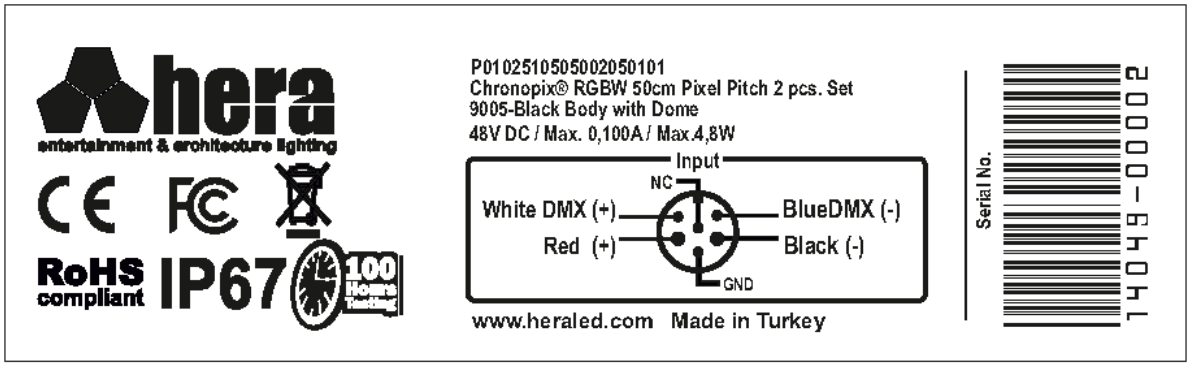
When differences exist; they shall be identified in the General product information section.

Name and address of factory (ies) .....:	HERA Eğlence ve Mimari Aydınlatma Sistemleri A.Ş. Güllübağlar Mahallesi Kahramanlar Caddesi No:3-1 34906 Pendik İstanbul / TÜRKİYE

Deney ve Kalibrasyon ELDAŞ MERKEZİ

Copy of marking plate:





Deney ve Kalibrasyon ELDAŞ MERKEZİ

General product information:

The product family varies according to the variables specified in the table below.

P0XXXXXXXX	XXX	XX	XX	XX	X	X
LED Color	Pixel Pitch	Number of Dots in the Node	Leader Cable Length	Body Color	Cable Hide Profile	Dome
Led Color Code	015 – 300 (cm)	01 – 70 (pcs)	01 – 70 (meter)	01-08	1:Present 0: N/A	1:Present 0:N/A
P01025105	**300**	**70**	**05**	**01**	**1**	**1**

Chronopix® RGBW 300 cm Pixel Pitch 70 pcs Set RAL9005 Black Body with Dome

IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.2 (0)	**GENERAL TEST REQUIREMENTS**		P
1.2 (0.3)	More sections applicable ..... :	Yes ☐ No ☒ Section/s:	—
1.2 (0.5)	Components	(see Annex 1)	—
1.2 (0.7)	**Information for luminaire design in light sources standards**		—
1.2 (0.7.2)	Light source safety standard ..... :		—
	Luminaire design in the light source safety standard		N/A

1.4 (2)	**CLASSIFICATION OF LUMINAIRES**		P
1.4 (2.2)	Type of protection ..... :	Class III	P
1.4 (2.3)	Degree of protection ..... :	IP67	—
1.4 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces ..... :	Yes ☒ No ☐	—
1.4 (2.5)	Luminaire for normal use ..... :	Yes ☒ No ☐	—
	Luminaire for rough service ..... :	Yes ☐ No ☒	—

1.5 (3)	**MARKING**		P
1.5 (3.2)	Mandatory markings		P
	Position of the marking		P
	Format of symbols/text		P
1.5 (3.3)	Additional information		P
	Language of instructions		P
1.5 (3.3.1)	Combination luminaires		P
1.5 (3.3.2)	Nominal frequency in Hz		N/A
1.5 (3.3.3)	Operating temperature		N/A
1.5 (3.3.5)	Wiring diagram		N/A
1.5 (3.3.6)	Special conditions		N/A
1.5 (3.3.7)	Metal halide lamp luminaire – warning		N/A
1.5 (3.3.8)	Limitation for semi-luminaires		N/A
1.5 (3.3.9)	Power factor and supply current		N/A
1.5 (3.3.10)	Suitability for use indoors		N/A
1.5 (3.3.11)	Luminaires with remote control		N/A

IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.5 (3.3.12)	Clip-mounted luminaire – warning		N/A
1.5 (3.3.13)	Specifications of protective shields		N/A
1.5 (3.3.14)	Symbol for nature of supply		N/A
1.5 (3.3.15)	Rated current of socket outlet		N/A
1.5 (3.3.16)	Rough service luminaire		N/A
1.5 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments		P
1.5 (3.3.18)	Non-ordinary luminaires with PVC cable		N/A
1.5 (3.3.19)	Protective conductor current in instruction if applicable		N/A
1.5 (3.3.20)	Provided with information if not intended to be mounted within arm's reach		N/A
1.5 (3.3.21)	Non replaceable and non-user replaceable light sources information provided		P
1.5 (3.3.22)	Controllable luminaires, classification of insulation provided		P
1.5 (3.3.23)	Luminaire without controlgear provided with necessary information for selection of appropriate component		N/A
1.5 (3.3.24)	If not supplied with terminal block, information on the packaging		N/A
1.5 (3.4)	Test with water		P
	Test with hexane		P
	Legible after test		P
	Label attached		P
1.6 (4)	**CONSTRUCTION**		P
1.6 (4.2)	Components replaceable without difficulty		N/A
1.6 (4.3)	Wireways smooth and free from sharp edges		P
1.6 (4.4)	**Lampholders**		N/A
1.6 (4.4.1)	Integral lampholder		N/A
1.6 (4.4.2)	Wiring connection		N/A
1.6 (4.4.3)	Lampholder for end-to-end mounting		N/A
1.6 (4.4.4)	Positioning		N/A

IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
	- pressure test (N) ..... :		—
	After test the lampholder comply with relevant standard sheets and show no damage		N/A
	After test on single-capped lampholder the lampholder have not moved from its position and show no permanent deformation		N/A
	- bending test (N) ..... :		—
	After test the lampholder have not moved from its position and show no permanent deformation		N/A
1.6 (4.4.5)	Peak pulse voltage		N/A
1.6 (4.4.6)	Centre contact		N/A
1.6 (4.4.7)	Parts in rough service luminaires resistant to tracking		N/A
1.6 (4.4.8)	Lamp connectors		N/A
1.6 (4.4.9)	Caps and bases correctly used		N/A
1.6 (4.4.10)	Light source for lampholder or connection according IEC 60061 not connected another way		N/A
1.6 (4.5)	**Starter holders**		N/A
	Starter holder in luminaires other than class II		N/A
	Starter holder class II construction		N/A
1.6 (4.6)	**Terminal blocks**		N/A
	Tails		N/A
	Unsecured blocks		N/A
1.6 (4.7)	**Terminals and supply connections**		N/A
1.6 (4.7.1)	Contact to metal parts		N/A
1.6 (4.7.2)	Test 8 mm live conductor		N/A
	Test 8 mm earth conductor		N/A
1.6 (4.7.3)	Terminals for supply conductors		P
1.6 (4.7.3.1)	Welded method and material		N/A
	- stranded or solid conductor		N/A
	- spot welding		N/A
	- welding between wires		N/A
	- Type Z attachment		N/A
	- mechanical test according to 15.6.2		N/A
	- electrical test according to 15.6.3		N/A

IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
	- heat test according to 15.6.3.2.3 and 15.6.3.2.4		N/A
1.6 (4.7.4)	Terminals other than supply connection		N/A
1.6 (4.7.5)	Heat-resistant wiring/sleeves		N/A
1.6 (4.7.6)	Multi-pole plug		N/A
	- test at 30 N		N/A
1.6 (4.8)	**Switches**		N/A
	- adequate rating		N/A
	- adequate fixing		N/A
	- polarized supply		N/A
	- compliance with IEC 61058-1 for electronic switches		N/A
1.6 (4.9)	**Insulating lining and sleeves**		**P**
1.6 (4.9.1)	Retainment		P
	Method of fixing ..... :	Epoxy	P
1.6 (4.9.2)	Insulated linings and sleeves:		N/A
	Resistant to a temperature > 20 °C to the wire temperature or		N/A
	a) & c) Insulation resistance and electric strength		N/A
	b) Ageing test. Temperature (°C) ..... :		N/A
1.6 (4.10)	**Double or reinforced insulation**		
1.6 (4.10.1)	No contact, mounting surface – accessible metal parts – wiring of basic insulation		N/A
	Safe installation fixed luminaires		N/A
	Capacitors and switches		N/A
	Interference suppression capacitors according to IEC 60384-14		N/A
1.6 (4.10.2)	Assembly gaps:		N/A
	- not coincidental		N/A
	- no straight access with test probe		N/A
1.6 (4.10.3)	Retainment of insulation:		N/A
	- fixed		N/A
	- unable to be replaced; luminaire inoperative		N/A
	- sleeves retained in position		N/A

IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
	- lining in lampholder		N/A
1.6 (4.10.4)	Protective impedance device		N/A
	Double or reinforced insulation bridged by appropriate and at least two resistors or two Y2 capacitors or one Y1 capacitor		N/A
	Y1 or Y2 capacitors comply with IEC 60384-14		N/A
	Resistors comply with test (a) in 14.1 of IEC 60065		N/A
1.6 (4.11)	**Electrical connections and current-carrying parts**		**P**
1.6 (4.11.1)	Contact pressure		N/A
1.6 (4.11.2)	Screws:		N/A
	- self-tapping screws		N/A
	- thread-cutting screws		N/A
1.6 (4.11.3)	Screw locking:		N/A
	- spring washer		N/A
	- rivets		N/A
1.6 (4.11.4)	Material of current-carrying parts		N/A
1.6 (4.11.5)	No contact to wood or mounting surface		P
1.6 (4.11.6)	Electro-mechanical contact systems		P
1.6 (4.12)	**Screws and connections (mechanical) and glands**		N/A
1.6 (4.12.1)	Screws not made of soft metal		N/A
	Screws of insulating material		N/A
	Torque test: torque (Nm); part..... :		N/A
	Torque test: torque (Nm); part..... :		N/A
	Torque test: torque (Nm); part..... :		N/A
1.6 (4.12.2)	Screws with diameter < 3 mm screwed into metal		N/A
1.6 (4.12.4)	Locked connections:		N/A
	- fixed arms; torque (Nm) ..... :		N/A
	- lampholder; torque (Nm) ..... :		N/A
	- push-button switches; torque 0,8 Nm ..... :		N/A
1.6 (4.12.5)	Screwed glands; force (Nm)..... :		N/A
1.6 (4.13)	**Mechanical strength**		**P**
1.6 (4.13.1)	Impact tests:		P

IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
	- fragile parts; energy (Nm) ..... :	0,35	P
	- other parts; energy (Nm)..... :	0,50	P
	1) live parts		P
	2) linings		P
	3) protection		P
	4) covers		P
1.6 (4.13.2)	Metal parts have adequate mechanical strength		P
1.6 (4.13.3)	Straight test finger		P
1.6 (4.13.4)	Rough service luminaires		N/A
	- IP54 or higher		N/A
	a) fixed		N/A
	b) hand-held		N/A
	c) delivered with a stand		N/A
	d) for temporary installations and suitable for mounting on a stand		N/A
1.6 (4.13.6)	Tumbling barrel		N/A
1.6 (4.14)	**Suspensions, fixings and means of adjusting**		N/A
1.6 (4.14.1)	Mechanical load:		N/A
	A) four times the weight		N/A
	B) torque 2,5 Nm		N/A
	C) bracket arm; bending moment (Nm)..... :		N/A
	D) load track-mounted luminaires		N/A
	E) clip-mounted luminaires, glass-shelve. Thickness (mm) ..... :		N/A
	Metal rod. diameter (mm) ..... :		N/A
	Fixed luminaire or independent control gear without fixing devices		N/A
1.6 (4.14.2)	Load to flexible cables		N/A
	Mass (kg) ..... :		—
	Stress in conductors (N/mm²) ..... :		N/A
	Mass (kg) of semi-luminaire ..... :		N/A
	Bending moment (Nm) of semi-luminaire ..... :		N/A
1.6 (4.14.3)	Adjusting devices:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- flexing test; number of cycles..... :		N/A
	- strands broken ..... :		N/A
	- electric strength test afterwards		N/A
1.6 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		N/A
1.6 (4.14.5)	Guide pulleys		N/A
1.6 (4.14.6)	Strain on socket-outlets		N/A
1.6 (4.15)	**Flammable materials**		N/A
	- glow-wire test 650°C ..... :	See Test Table 1.15 (13.3.2)	N/A
	- spacing ≥30 mm		N/A
	- screen withstanding test of 13.3.1		N/A
	- screen dimensions		N/A
	- no fiercely burning material		N/A
	- thermal protection		N/A
	- electronic circuits exempted		N/A
1.6 (4.15.2)	Luminaires made of thermoplastic material with lamp control gear		P
	a) construction		P
	b) temperature sensing control		N/A
	c) surface temperature		P
1.6 (4.16)	**Luminaires for mounting on normally flammable surfaces**		**P**
	No lamp control gear ..... :	(compliance with Section 12)	P
	Provided with adaptor for a track meet the requirements for direct mounting on normally flammable surfaces		N/A
1.6 (4.16.1)	Lamp control gear spacing:		N/A
	- spacing 35 mm		N/A
	- spacing 10 mm		N/A
1.6 (4.16.2)	Thermal protection:		N/A
	- in lamp control gear		N/A
	- external		N/A
	- fixed position		N/A
	- temperature marked lamp control gear		N/A
1.6 (4.16.3)	Design to satisfy the test of 12.6	(see clause 12.6)	P

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Clause	Requirement + Test	Result - Remark	Verdict
1.6 (4.17)	**Drain holes**		N/A
	Clearance at least 5 mm		N/A
1.6 (4.18)	**Resistance to corrosion**		**P**
1.6 (4.18.1)	- rust-resistance		P
1.6 (4.18.2)	- season cracking in copper		P
1.6 (4.18.3)	- corrosion of aluminium		P
1.6 (4.19)	Ignitors compatible with ballast		N/A
1.6 (4.20)	Rough service vibration		N/A
1.6 (4.21)	**Protective shield**		N/A
1.6 (4.21.1)	Shield fitted if tungsten halogen lamps or metal halide lamps		N/A
	Shield of glass if tungsten halogen lamps		N/A
1.6 (4.21.2)	Particles from a shattering lamp not impair safety		N/A
1.6 (4.21.3)	No direct path		N/A
1.6 (4.21.4)	Impact test on shield		N/A
	Glow-wire test on lamp compartment..... :	See Test Table 1.15 (13.3.2)	N/A
1.6 (4.22)	Attachments to lamps not cause overheating or damage		N/A
1.6 (4.23)	Semi-luminaires comply Class II		N/A
1.6 (4.24)	**Photobiological hazards**		**N/A**
1.6 (4.24.1)	No excessive UV radiation if tungsten halogen lamps and metal halide lamps (Annex P)		N/A
1.6 (4.24.2)	Retinal blue light hazard		N/A
	Class of risk group assessed according to IEC/TR 62778 ..... :		—
	Luminaires with E_{thr} :		N/A
	a) Fixed luminaires		N/A
	- distance x m, borderline between RG1 and RG2 .. :		N/A
	- marking and instruction according 3.2.23		N/A
	b) Portable and handheld luminaires		N/A
	- marking according 3.2.23 if RG1 exceeded at 200 mm according to IEC/TR 62778		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Portable luminaires for children IEC 60598-2-10 and Mains socket outlet nightlights IEC 60598-2-12 not exceed RG1 at 200 mm according to IEC/62778		N/A
1.6 (4.25)	**Mechanical hazard**		**P**
	No sharp point or edges		P
1.6 (4.26)	**Short-circuit protection**		N/A
1.6 (4.26.1)	Adequate means of uninsulated accessible SELV parts		N/A
1.6 (4.26.2)	Short-circuit test with test chain according 4.26.3		N/A
	Test chain not melt through		N/A
	Test sample not exceed values of Table 12.1 and 12.2		N/A
1.6 (4.27)	**Terminal blocks with integrated screwless earthing contacts**		N/A
	Test according Annex V		N/A
	Pull test of terminal fixing (20 N)		N/A
	After test, resistance < 0,05 Ω		N/A
	Pull test of mechanical connection (50 N)		N/A
	After test, resistance < 0,05 Ω		N/A
	Voltage drop test, resistance < 0,05 Ω		N/A
1.6 (4.28)	**Fixing of thermal sensing control**		N/A
	Not plug-in or easily replaceable type		N/A
	Reliably kept in position		N/A
	No adhesive fixing if UV radiations from a lamp can degrade the fixing		N/A
	Not outside the luminaire enclosure		N/A
	Test of adhesive fixing:		N/A
	Max. temperature on adhesive material (°C) ..... :		—
	100 cycles between t min and t max		N/A
	Temperature sensing control still in position		N/A
1.6 (4.29)	**Luminaires with non-replaceable light source**		**P**
	Not possible to replace light source		P
	Live part not accessible after parts have been opened by hand or tools		P
1.6 (4.30)	**Luminaires with non-user replaceable light source**		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	If protective cover provide protection against electric shock and marked with “caution, electric shock risk” symbol:		N/A
	Minimum two fixing means		N/A
1.6 (4.31)	**Insulation between circuits**		N/A
	Circuits insulated from LV supply fulfil requirements according 4.31.1 – 4.31.3		N/A
	Controllable luminaires requiring same level of insulation for all components, the insulation between control terminals and LV supply fulfil requirements according 4.31.1 – 4.31.3		N/A
1.6 (4.31.1)	SELV circuits		P
	Used SELV source		P
	Voltage ≤ ELV		N/A
	Insulating of SELV circuits from LV supply		N/A
	Insulating of SELV circuits from other non SELV circuits		N/A
	Insulating of SELV circuits from FELV		N/A
	Insulating of SELV circuits from other SELV circuits		N/A
	SELV circuits insulated from accessible parts according Table X.1		N/A
	Plugs not able to enter socket-outlets of other voltage systems		P
	Socket outlets does not admit plugs of other voltage systems		P
	Plugs and socket-outlets does not have protective conductor contact		P
1.6 (4.31.2)	FELV circuits		N/A
	Used FELV source		N/A
	Voltage ≤ ELV		N/A
	Insulating of FELV circuits from LV supply		N/A
	FELV circuits insulated from accessible parts according Table X.1		N/A
	Plugs not able to enter socket-outlets of other voltage systems		N/A
	Socket outlets does not admit plugs of other voltage systems		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Socket-outlets does not have protective conductor contact		N/A
1.6 (4.31.3)	Other circuits		N/A
	Other circuits insulated from accessible parts according Table X.1		N/A
	Class II construction with equipotential bonding for protection against indirect contacts with live parts:		N/A
	- conductive parts are connected together		N/A
	- test according 7.2.3		N/A
	- conductive part not cause an electric shock in case of an insulation fault		N/A
	- equipotential bonding in master/slave applications		N/A
	- master luminaire provided with terminal for accessible conductive parts of slave luminaires		N/A
	- slave luminaire constructed as class I		N/A
1.6 (4.32)	**Overvoltage protective devices**		N/A
	Comply with IEC 61643-11		N/A
	External to controlgear and connected to earth:		N/A
	- only in fixed luminaires		N/A
	- only connected to protective earth		N/A

1.7 (11)	**CREEPAGE DISTANCES AND CLEARANCES**		N/A
1.7 (11.2.1)	Impulse withstand category (Normal category II)	Category II ☐ Category III ☐	—
	Category III according Annex U		N/A
	Protected against pollution, reduced creepage and clearance according Annex P of IEC 61347-1		N/A
1.7 (11.2.2)	Creepage distances for frequency up to 30 kHz	See Test Table 1.7 (11.2) I	N/A
	Creepage distances for frequency over 30 kHz:		N/A
	- Controlgear marked with $\hat{U}_{OUT}$ and f_{UOUT} according IEC 61347-1, clause 7.1, item w	See Test Table 1.7 (11.2) II	N/A
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 1.7 (11.2) II	N/A
1.7 (11.2.3)	Clearances for frequency up to 30 kHz	See Test Table 1.7 (11.2) I	N/A
	Clearances distances for frequency over 30 kHz:		N/A
	- Controlgear marked with U_P	See Test Table 1.7 (11.2) II	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 1.7 (11.2) II	N/A
1.8 (7)	**PROVISION FOR EARTHING**		N/A
1.8 (7.2.1 + 7.2.3)	Accessible metal parts		N/A
	Metal parts in contact with supporting surface		N/A
	Resistance < 0,5 Ω..... :		N/A
	Self-tapping screws used		N/A
	Thread-forming screws		N/A
	Thread-forming screw used in a grove		N/A
	Earth makes contact first		N/A
	Terminal blocks with integrated screwless earthing contacts tested according Annex V		N/A
	Protective earthing of the luminaire not via built-in control gear		N/A
1.8 (7.2.2 + 7.2.3)	Earth continuity in joints, etc.		N/A
1.8 (7.2.4)	Locking of clamping means		N/A
	Compliance with 4.7.3		N/A
	Terminal blocks with integrated screwless earthing contacts tested according Annex V		N/A
1.8 (7.2.5)	Earth terminal integral part of connector socket		N/A
1.8 (7.2.6)	Earth terminal adjacent to mains terminals		N/A
1.8 (7.2.7)	Electrolytic corrosion of the earth terminal		N/A
1.8 (7.2.8)	Material of earth terminal		N/A
	Contact surface bare metal		N/A
1.8 (7.2.10)	Class II luminaire for looping-in		N/A
	Double or reinforced insulation to functional earth		N/A
1.8 (7.2.11)	Earthing core coloured green-yellow		N/A
	Length of earth conductor		N/A
1.9 (14)	**SCREW TERMINALS**		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Separately approved; component list	(see Annex 1)	N/A
	Part of the luminaire	(see Annex 3)	N/A
1.9 (15)	**SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS**		N/A
	Separately approved; component list..... :	(see Annex 1)	N/A
	Part of the luminaire ..... :	(see Annex 4)	N/A
1.10 (5)	**EXTERNAL AND INTERNAL WIRING**		P
1.10 (5.2)	**Supply connection and external wiring**		**P**
1.10 (5.2.1)	Means of connection ..... :		P
	Outdoor luminaire has not PVC insulated external wiring if not class III or SELV ≤ 25 V a.c./60 V d.c. or protected from outdoor environment		N/A
1.10 (5.2.2)	Type of cable ..... :		N/A
	Nominal cross-sectional area (mm²) ..... :		N/A
	Cables equal to IEC 60227 or IEC 60245		N/A
1.10 (5.2.3)	Type of attachment, X, Y or Z		P
1.10 (5.2.5)	Type Z not connected to screws		P
1.10 (5.2.6)	Cable entries:		P
	- suitable for introduction		P
	- adequate degree of protection		P
1.10 (5.2.7)	Cable entries through rigid material have rounded edges		P
1.10 (5.2.8)	Insulating bushings:		N/A
	- suitably fixed		N/A
	- material in bushings		N/A
	- material not likely to deteriorate		N/A
	- tubes or guards made of insulating material		N/A
1.10 (5.2.9)	Locking of screwed bushings		N/A
1.10 (5.2.10)	Cord anchorage:		N/A
	- covering protected from abrasion		N/A
	- clear how to be effective		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- no mechanical or thermal stress		N/A
	- no tying of cables into knots etc.		N/A
	- insulating material or lining		N/A
1.10 (5.2.10.1)	Cord anchorage for type X attachment:		N/A
	a) at least one part fixed		N/A
	b) types of cable		N/A
	c) no damaging of the cable		N/A
	d) whole cable can be mounted		N/A
	e) no touching of clamping screws		N/A
	f) metal screw not directly on cable		N/A
	g) replacement without special tool		N/A
	Glands not used as anchorage		N/A
	Labyrinth type anchorages		N/A
1.10 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment		P
1.10 (5.2.10.3)	Tests:		
	- impossible to push cable; unsafe		P
	- pull test: 25 times; pull (N) ..... :	60	P
	- torque test: torque (Nm) ..... :	0,25	P
	- displacement ≤ 2 mm		P
	- no movement of conductors		P
	- no damage of cable or cord		P
	- function independent of electrical connection		P
1.10 (5.2.11)	External wiring passing into luminaire		P
1.10 (5.2.12)	Looping-in terminals		P
1.10 (5.2.13)	Wire ends not tinned		P
	Wire ends tinned: no cold flow		P
1.10 (5.2.14)	Mains plug same protection		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Class III luminaire plug		P
	No unsafe compatibility		P
1.10 (5.2.16)	Appliance inlets (IEC 60320)		N/A
	Installation couplers (IEC 61535)		N/A
	Other appliance inlet or connector according relevant IEC standard		N/A
1.10 (5.2.17)	No standardized interconnecting cables properly assembled		P
1.10 (5.2.18)	Used plug in accordance with		P
	- IEC 60083		N/A
	- other standard		P
1.10 (5.3)	**Internal wiring**		**P**
1.10 (5.3.1)	Internal wiring of suitable size and type		N/A
	Through wiring		N/A
	- not delivered/ mounting instruction		N/A
	- factory assembled		N/A
	- socket outlet loaded (A) ..... :		N/A
	- temperatures ..... :	(see Annex 2)	N/A
	Green-yellow for earth only		N/A
1.10 (5.3.1.1)	Internal wiring connected directly to fixed wiring		N/A
	Cross-sectional area (mm²)..... :		N/A
	Insulation thickness (mm) ..... :		N/A
	Extra insulation added where necessary		N/A
1.10 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		N/A
	Cross-sectional area (mm²)..... :		N/A
1.10 (5.3.1.3)	Double or reinforced insulation for class II		N/A
1.10 (5.3.1.4)	Conductors without insulation		N/A
1.10 (5.3.1.5)	SELV current-carrying parts		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
1.10 (5.3.1.6)	Insulation thickness other than PVC or rubber		N/A
1.10 (5.3.2)	Sharp edges etc.		N/A
	No moving parts of switches etc.		N/A
	Joints, raising/lowering devices		N/A
	Telescopic tubes etc.		N/A
	No twisting over 360°		N/A
1.10 (5.3.3)	Insulating bushings:		N/A
	- suitable fixed		N/A
	- material in bushings		N/A
	- material not likely to deteriorate		N/A
	- cables with protective sheath		N/A
1.10 (5.3.4)	Joints and junctions effectively insulated		N/A
1.10 (5.3.5)	Strain on internal wiring		N/A
1.10 (5.3.6)	Wire carriers		N/A
1.10 (5.3.7)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		N/A
1.10 (5.4)	**Test to determine suitability of conductors having a reduced cross-sectional area**		N/A
	Under test the temperature of the luminaire wiring insulation not exceed the limits stated in Table 12.2	(see Annex 2)	N/A
	No damage to luminaire wiring after test		N/A

1.11 (8)	**PROTECTION AGAINST ELECTRIC SHOCK**		P
1.11 (8.2.1)	Live parts not accessible		P
	Basic insulated parts not used on the outer surface without appropriate protection		P
	Basic insulated parts not accessible with standard test finger on portable, settable and adjustable luminaires		P
	Basic insulated parts not accessible with Ø 50 mm probe from outside, other types of luminaires		P
	Lamp and starterholders in portable and adjustable luminaires comply with double or reinforced insulation requirements		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Basic insulation only accessible under lamp or starter replacement		N/A
	Protection in any position		P
	Double-ended tungsten filament lamp		N/A
	Insulation lacquer not reliable		N/A
	Double-ended high-pressure discharge lamp		N/A
	Relevant warning according to 3.2.18 fitted to the luminaire		N/A
1.11 (8.2.2)	Portable luminaire adjusted in most unfavourable position		N/A
1.11 (8.2.3.a)	Class II luminaire:		N/A
	- basic insulated metal parts not accessible during starter or lamp replacement		N/A
	- basic insulation not accessible other than during starter or lamp replacement		N/A
	- glass protective shields not used as supplementary insulation		N/A
1.11 (8.2.3.b)	BC lampholder of metal in class I luminaires shall be earthed		N/A
1.11 (8.2.3.c)	SELV circuits with exposed current carrying parts:		P
	Ordinary luminaire:		P
	- voltage under load (V)..... :	48 VDC	P
	- no-load voltage (V)..... :		N/A
	- touch current if applicable (mA) ..... :		N/A
	One conductive part insulated if required		N/A
	Other than ordinary luminaire:		N/A
	- nominal voltage (V) ..... :		N/A
	Class III luminaire only for connection to SELV		N/A
	Class III luminaire not provided with means for protective earthing		N/A
1.11 (8.2.4)	Portable luminaire has protection independent of supporting surface		N/A
1.11 (8.2.5)	Compliance with the standard test finger or relevant probe		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
1.11 (8.2.6)	Covers reliably secured		N/A
1.11 (8.2.7)	Luminaire other than below with capacitor > 0,5 μF not exceed 50 V 1 min after disconnection		N/A
	Portable luminaire with capacitor > 0,1 μF (0.25) not exceed 34 V 1 s after disconnection		N/A
	Other luminaires with capacitor > 0,1 μF (0.25) with plug and track adaptors not exceed 60 V 5 s after disconnection		N/A
1.12 (12)	**ENDURANCE TEST AND THERMAL TEST**		P
1.12 (-)	If IP > IP 20 relevant test of (12.4), (12.5) and (12.6) after (9.2) before (9.3) specified in 1.13		—
1.12 (12.2)	**Selection of lamps and ballasts**		**—**
	Lamp used according Annex B	(Lamp used see Annex 2)	—
	Controlgear if separate and not supplied	(Controlgear used see Annex 2)	—
1.12 (12.3)	**Endurance test**		**P**
	a) mounting-position ..... :	Normal use	—
	b) test temperature (°C) ..... :	35°C	—
	c) total duration (h) ..... :	240h	—
	d) supply voltage (V) ..... :	48VDC	—
	d) if not equipped with controlgear, constant voltage/current (V) or (A) ..... :		—
	e) luminaire ceases to operate		—
1.12 (12.3.2)	After endurance test:		P
	- no part unserviceable		P
	- luminaire not unsafe		P
	- no damage to track system		P
	- marking legible		P
	- no cracks, deformation etc.		P
1.12 (12.4)	**Thermal test (normal operation)**	(see Annex 2)	P
1.12 (12.5)	**Thermal test (abnormal operation)**	(see Annex 2)	P
1.12 (12.6)	**Thermal test (failed lamp control gear condition):**		**N/A**

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Clause	Requirement + Test	Result - Remark	Verdict
1.12 (12.6.1)	Through wiring or looping-in wiring loaded by a current of (A) ..... :		—
	- case of abnormal conditions ..... :		—
	- electronic lamp control gear		N/A
	- measured winding temperature (°C): at 1,1 Un .... :		—
	- measured mounting surface temperature (°C) at 1,1 Un ..... :		N/A
	- calculated mounting surface temperature (°C) ..... :		N/A
	- track-mounted luminaires		N/A
1.12 (12.6.2)	Temperature sensing control		N/A
	- case of abnormal conditions ..... :		—
	- thermal link		N/A
	- manual reset cut-out		N/A
	- auto reset cut-out		N/A
	- measured mounting surface temperature (°C) ..... :		N/A
	- track-mounted luminaires		N/A
1.12 (12.7)	**Thermal test (failed lamp control gear in plastic luminaires):**		N/A
1.12 (12.7.1)	Luminaire without temperature sensing control		N/A
1.12 (12.7.1.1)	Luminaire with fluorescent lamp ≤ 70W		N/A
	Test method 12.7.1.1 or Annex W ..... :		—
	Test according to 12.7.1.1:		N/A
	- case of abnormal conditions ..... :		—
	- Ballast failure at supply voltage (V) ..... :		—
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
	Test according to Annex W:		N/A
	- case of abnormal conditions ..... :		—
	- measured winding temperature (°C): at 1,1 Un ..... :		—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un ..... :		—

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Clause	Requirement + Test	Result - Remark	Verdict
	- calculated temperature of fixing point/exposed part (°C) ..... :		—
	Ball-pressure test .....:	See Test Table 1.15 (13.2.1)	N/A
1.12 (12.7.1.2)	Luminaire with discharge lamp, fluorescent lamp > 70W, transformer > 10 VA		N/A
	- case of abnormal conditions ..... :		—
	- measured winding temperature (°C): at 1,1 Un ..... :		—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un ..... :		—
	- calculated temperature of fixing point/exposed part (°C) ..... :		—
	Ball-pressure test ..... :	See Test Table 1.15 (13.2.1)	N/A
1.12 (12.7.1.3)	Luminaire with short circuit proof transformers ≤ 10 VA		N/A
	- case of abnormal conditions ..... :		—
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
1.12 (12.7.2)	Luminaire with temperature sensing control		N/A
	- thermal link..... :	Yes ☐ No ☐	—
	- manual reset cut-out ..... :	Yes ☐ No ☐	—
	- auto reset cut-out ..... :	Yes ☐ No ☐	—
	- case of abnormal conditions ..... :		—
	- highest measured temperature of fixing point/ exposed part (°C): ..... :		—
	Ball-pressure test: ..... :	See Test Table 1.15 (13.2.1)	N/A

1.13 (9)	**RESISTANCE TO DUST AND MOISTURE**		P
1.13 (-)	If IP > IP 20 the order of tests as specified in clause 1.12		P
1.13 (9.2)	Tests for ingress of dust, solid objects and moisture:		P
	- classification according to IP..... :	IP 67	—
	- mounting position during test ..... :	Fixed	—
	- fixing screws tightened; torque (Nm) ..... :	—	—
	- tests according to clauses..... :		—

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Clause	Requirement + Test	Result - Remark	Verdict
	- electric strength test afterwards		P
	a) no deposit in dust-proof luminaire		P
	b) no talcum in dust-tight luminaire		P
	c) no trace of water on current-carrying parts or on insulation where it could become a hazard		P
	c.1) For luminaires without drain holes – no water entry		P
	c.2) For luminaires with drain holes – no hazardous water entry		N/A
	d) no water in watertight or pressure watertight luminaire		N/A
	e) no contact with live parts (IP 2X)		P
	e) no entry into enclosure (IP 3X and IP 4X)		P
	e) no contact with live parts through drain holes and ventilation slots (IP3X and IP4X)		N/A
	f) no trace of water on part of lamp requiring protection from splashing water		N/A
	g) no damage of protective shield or glass envelope		N/A
1.13 (9.3)	Humidity test 48 h		P
1.14 (10)	**INSULATION RESISTANCE AND ELECTRIC STRENGTH**		P
1.14 (10.2.1)	Insulation resistance test		P
	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø ..... :		—
	Insulation resistance (MΩ) ..... :		—
	SELV		P
	- between current-carrying parts of different polarity :		P
	- between current-carrying parts and mounting surface..... :		P
	- between current-carrying parts and metal parts of the luminaire..... :		P
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :		N/A
	- Insulation bushings as described in Section 5 ..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Other than SELV		N/A
	- between live parts of different polarity ..... :		N/A
	- between live parts and mounting surface ..... :		N/A
	- between live parts and metal parts ..... :		N/A
	- between live parts of different polarity through action of a switch..... :		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :		N/A
	- Insulation bushings as described in Section 5 .....:		N/A
1.14 (10.2.2)	Electric strength test		P
	Dummy lamp		N/A
	Luminaires with ignitors after 24 h test		N/A
	Luminaires with manual ignitors		N/A
	Test voltage (V)..... :	500	P
	SELV		P
	- between current-carrying parts of different polarity :		P
	- between current-carrying parts and mounting surface..... :		P
	- between current-carrying parts and metal parts of the luminaire..... :		P
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :		N/A
	- Insulation bushings as described in Section 5 .....:		N/A
	Other than SELV		N/A
	- between live parts of different polarity ..... :		N/A
	- between live parts and mounting surface ..... :		N/A
	- between live parts and metal parts ..... :		N/A
	- between live parts of different polarity through action of a switch..... :		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :		N/A
	- Insulation bushings as described in Section 5 .....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
1.14 (10.3)	Touch current or protective conductor current (mA).:		N/A
1.15 (13)	**RESISTANCE TO HEAT, FIRE AND TRACKING**		P
1.15 (13.2.1)	Ball-pressure test .....:	See Test Table 1.15 (13.2.1)	P
1.15 (13.3.1)	Needle-flame test (10 s).....:	See Test Table 1.15 (13.3.1)	N/A
1.15 (13.3.2)	Glow-wire test (650°C) .....:	See Test Table 1.15 (13.3.2)	N/A
1.15 (13.4)	Proof tracking test (IEC 60112).....:	See Test Table 1.15 (13.4)	—

1.7 (11.2)	**TABLE I: Creepage distances and clearances**							**N/A**
	Minimum distances (mm) for a.c. up to 30 kHz sinusoidal voltages							
	Applicable part of IEC 60598-1 Table 11.1.A*, 11.1.B* and 11.2*							
	Insulation type **	**Measured clearance**	**Required**		**Measured creepage**	**Required**		
			clearance	***Table**		**creepage**	***Table**	
Distance 1:								
Working voltage (V) .....:								—
PTI .....:	< 600 ☐ ≥ 600 ☐							—
Pulse voltage or U_P if applicable (kV) .....:								—
Supplementary information:								
Distance 2:								
Working voltage (V) .....:								—
PTI .....:	< 600 ☐ ≥ 600 ☐							—
Pulse voltage or U_P if applicable (kV) .....:								—
Supplementary information:								
Distance 3:								
Working voltage (V) .....:								—
PTI .....:	< 600 ☐ ≥ 600 ☐							—
Pulse voltage or U_P if applicable (kV) .....:								—
Supplementary information:								

** Insulation type: B – Basic; S – Supplementary; R – Reinforced. See also IEC 60598-1 Annex M.

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Clause	Requirement + Test	Result - Remark	Verdict

1.7 (11.2)	TABLE II: Creepage distances and clearances							N/A
Minimum distances (mm) for a.c. higher than 30 kHz sinusoidal voltages								
Applicable part of IEC 61347-1 Table 7 and 8* or IEC 60664-4 Table 1 and 2								
Distances	**Insulation type ****	**Measured clearance**	**Required**		**Measured creepage**	**Required**		
			clearance	***Table**		**creepage**	***Table**	
Distance 1:								
Working voltage (V) .....:								—
Frequency if applicable (kHz) .....:								—
PTI .....:					< 600 ☐ ≥ 600 ☐			—
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV) ..... :								—
Supplementary information:								
Distance 2:								
Working voltage (V) .....:								—
Frequency if applicable (kHz) .....:								—
PTI .....:					< 600 ☐ ≥ 600 ☐			—
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV) ..... :								—
Supplementary information:								
Distance 3:								
Working voltage (V) .....:								—
Frequency if applicable (kHz) .....:								—
PTI .....:					< 600 ☐ ≥ 600 ☐			—
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV) ..... :								—
Supplementary information:								

** Insulation type: B – Basic; S – Supplementary; R – Reinforced.

1.15 (13.2.1)	TABLE: Ball Pressure Test of Thermoplastics			P
Allowed impression diameter (mm) ..... :		2		—
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)	
Connector Locker Disk	HERA	75	0,87	

IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict

Connector	HERA	125	0,93
Supplementary information:			

1.15 (13.3.1)	TABLE: Needle-flame test (IEC 60695-11-5)				N/A
Object/ Part No./ Material	Manufacturer/ trademark	Duration of application of test flame (ta); (s)	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
Supplementary information:					

1.15 (13.3.2)	TABLE: Glow-wire test (IEC 60695-2-11)			N/A
Glow wire temperature ..... :	650°C			—
Object/ Part No./ Material	Manufacturer/ trademark	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
Supplementary information:				

1.15 (13.4)	TABLE: Proof tracking test (IEC 60112)					—
Test voltage PTI ..... :		175 V				—
Object/ Part No./ Material	Manufacturer/ trademark	Withstand 50 drops without failure on three places or on three specimens				Verdict
Supplementary information:						

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information					P
Object / part No.	**Code**	**Manufacturer/ trademark**	**Type / model**	**Technical data**	**Standard**	**Mark(s) of conformity[1)]**
PCB Connector	A	Chogori	22206131 22206625	IP67	IEC 60695-11-10 IEC 60695-2-12 IEC60695-2-13 IEC 60112 IEC 60695-10-2	UL TUV CQC
PCB-FR4	A	Printronics	C13116_R1.0	1,6mm FR4 35/35um Cu	—	UL
LED	A	Cree	Cree CLQ6A	PLCC8 RGBW4 Clour Led	—	—
Cable	A	Başoğlu Kablo	2x1,5mm^2 4x0,22mm^2 Multimedya Control Cable	—	TS13755	TSE
Cable	A	Başoğlu Kablo	2x1,5mm^2 4x0,22mm^2 LSZH Control Cable	—	TS 13755	TSE

Supplementary information:

[1)] Provided evidence ensures the agreed level of compliance. See OD-CB2039.

The codes above have the following meaning:

A - The component is replaceable with another one, also certified, with equivalent characteristics

B - The component is replaceable if authorised by the test house

C - Integrated component tested together with the appliance

D - Alternative component

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 2	TABLE: Thermal tests of Section 12		P
	Type reference ..... :		—
	Lamp used..... :	—	—
	Lamp control gear used..... :		—
	Mounting position of luminaire ..... :		—
	Supply wattage (W) ..... :		—
	Supply current (A) ..... :		—
	Temperatures in test 1 - 4 below are corrected for ta (°C) ..... :	25	—
	- abnormal operating mode ..... :	—	—
1.12 (12.4)	- test 1: rated voltage ..... :	48 VDC	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current ..... :	—	—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage ..... :	—	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	—	—
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current ..... :	—	—

Temperature measurements (°C)

Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Insulation	25						75
Connector (PCB)	25						105
Connector (Main Cable)	25						105
Diffuser	25						75
Enclosure (Metal)	25						60
Mounting Surface	25						90

Supplementary information:

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 3	**Screw terminals (part of the luminaire)**		N/A
(14)	**SCREW TERMINALS**		N/A
(14.2)	Type of terminal.....:		—
	Rated current (A).....:		—
(14.3.2.1)	One or more conductors		N/A
(14.3.2.2)	Special preparation		N/A
(14.3.2.3)	Terminal size		N/A
	Cross-sectional area (mm²).....:		—
(14.3.3)	Conductor space (mm).....:		N/A
(14.4)	Mechanical tests		N/A
(14.4.1)	Minimum distance		N/A
(14.4.2)	Cannot slip out		N/A
(14.4.3)	Special preparation		N/A
(14.4.4)	Nominal diameter of thread (metric ISO thread).....:	M	N/A
	External wiring		N/A
	No soft metal		N/A
(14.4.5)	Corrosion		N/A
(14.4.6)	Nominal diameter of thread (mm) .....:		N/A
	Torque (Nm).....:		N/A
(14.4.7)	Between metal surfaces		N/A
	Lug terminal		N/A
	Mantle terminal		N/A
	Pull test; pull (N).....:		N/A
(14.4.8)	Without undue damage		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 4	**Screwless terminals (part of the luminaire)**		N/A
(15)	**SCREWLESS TERMINALS**		N/A
(15.2)	Type of terminal.....:		—
	Rated current (A).....:		—
(15.3.1)	Material		N/A
(15.3.2)	Clamping		N/A
(15.3.3)	Stop		N/A
(15.3.4)	Unprepared conductors		N/A
(15.3.5)	Pressure on insulating material		N/A
(15.3.6)	Clear connection method		N/A
(15.3.7)	Clamping independently		N/A
(15.3.8)	Fixed in position		N/A
(15.3.10)	Conductor size		N/A
	Type of conductor		N/A
(15.5)	Terminals and connections for internal wiring		N/A
(15.5.1)	Mechanical tests		N/A
(15.5.1.1.1)	Pull test spring-type terminals (4 N, 4 samples) .....:		N/A
(15.5.1.1.2)	Pull test pin or tab terminals (4 N, 4 samples) .....:		N/A
	Insertion force not exceeding 50 N		N/A
(15.5.1.2)	Permanent connections: pull-off test (20 N)		N/A
(15.5.2)	Electrical tests		N/A
	Voltage drop (mV) after 1 h (4 samples).....:		N/A
	Voltage drop of two inseparable joints		N/A
	Number of cycles:		—
	Voltage drop (mV) after 10th alt. 25th cycle (4 samples).....:		N/A
	Voltage drop (mV) after 50th alt. 100th cycle (4 samples).....:		N/A
	After ageing, voltage drop (mV) after 10th alt. 25th cycle (4 samples) .....:		N/A
	After ageing, voltage drop (mV) after 50th alt. 100th cycle (4 samples) .....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
(15.6)	Terminals and connections for external wiring		N/A
(15.6.1)	Conductors		N/A
	Terminal size and rating		N/A
15.6.2	Mechanical tests		N/A
(15.6.2.1)	Pull test spring-type terminals or welded connections (4 samples); pull (N) .....:		N/A
(15.6.2.2)	Pull test pin or tab terminals (4 samples); pull (N) .....:		N/A
(15.6.3)	Electrical tests		N/A
	Tests according 15.6.3.1 + 15.6.3.2 in IEC 60598-1		N/A

(15.6.3.1) (15.6.3.2)	**TABLE: Contact resistance test / Heating tests**									N/A
	Voltage drop (mV) after 1 h									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
	Voltage drop of two inseparable joints									
	Voltage drop after 10th alt. 25th cycle									
	Max. allowed voltage drop (mV) ..... :									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
	Voltage drop after 50th alt. 100th cycle									
	Max. allowed voltage drop (mV) ..... :									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
	Continued ageing: voltage drop after 10th alt. 25th cycle									
	Max. allowed voltage drop (mV) ..... :									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
	Continued ageing: voltage drop after 50th alt. 100th cycle									
	Max. allowed voltage drop (mV) ..... :									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										

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Clause	Requirement + Test	Result - Remark	Verdict

List of test equipment used:

Clause	Measurement / testing	Testing / measuring equipment / material used, (Equipment ID)	Range used	Last Calibration date	Calibration due date
4.13.1	Mechanical strength tests	Spring Hammer, PTL F22.50 SRNo.5031391	0,2 – 1,0 j	29.05.2019	29.05.2021
8.2.5	Protection against electric shock tests	Test Finger, Apsis	12mm	05.02.2020	05.02.2022
9.3.1	Humidity Test	Test Cabinet, Nüve KD200 SRNo.06-0176	20°C .. 250°C	03.02.2021	03.02.2023
10.2.1	Insulation resistance tests	OMNIA AR8106 SRNo.9520432	-	11.01.2021	11.01.2022
10.2.2	Electric strength tests	OMNIA AR8106 SRNo.9520432	-	11.01.2021	11.01.2022
12.3.1	Endurance tests	Test Cabinet, Nüve KD200 Multimeter, FLUKE 287 SRNo.23240087 Power analyzer, ZERA TPZ 308 SRNo.4782	20°C .. 250°C - -	03.02.2021 15.12.2020 24.07.2020	03.02.2022 15.12.2021 24.07.2021
12.4.1	Thermal tests	Thermometer/Termocouples Agilent 34972A SRNo.MY49014902 Multimeter, FLUKE 287 SRNo.23240087 Power analyzer, ZERA TPZ 308 SRNo.4782	J type - 180°C..+800°C K type - 180°C..+1300° C - -	25.05.2017 15.12.2020 24.07.202	25.05.2022 15.12.2021 24.07.2021
13.2.1	Resistance to heat test	Ball pressure test apparatus Hong Tong BP-1 SRNo.HT150907A1		30.07.2018	30.07.2021
13.3.2	Resistance to ignition testing	Glow-wire, Apsis KT1000 SRNo.126701	0°C .. 1000°C	11.04.2018	11.04.2021

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Clause	Requirement + Test	Result - Remark	Verdict

Identity Declaration

16/03/2021

AYNİYET BEYANI

IDENTITY DECLARATION

Chronopix Serisi ürünlerin bütün teknik özelliklerinin (tasarım, konstrüksüyon, özellikler, kritik komponentler) aynı olduğunu beyan ederiz.

We declare that the products are identical in all technical respects (design, construction, properties, critical components).

Model/Type Ref: **Chronopix Series**

P0XXXXXXX	XXX	XX	XX	XX	X	X
LED Color	Pixel Pitch	Number of Dots in the Node	Leader Cable Length	Body Color	Cable Hide Profile	Dome
Led Color Code	015 – 300 (cm)	01 – 70 (pcs)	01 – 70 (meter)	01-08	1:Present 0: N/A	1:Present 0:N/A
P01025105	**300**	**70**	**05**	**01**	**1**	**1**

Chronopix® RGBW 300 cm Pixel Pitch 70 pcs Set RAL9005 Black Body with Dome

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Mahmut AKGÜL

Deney ve Kalibrasyon ELDAŞ MERKEZİ

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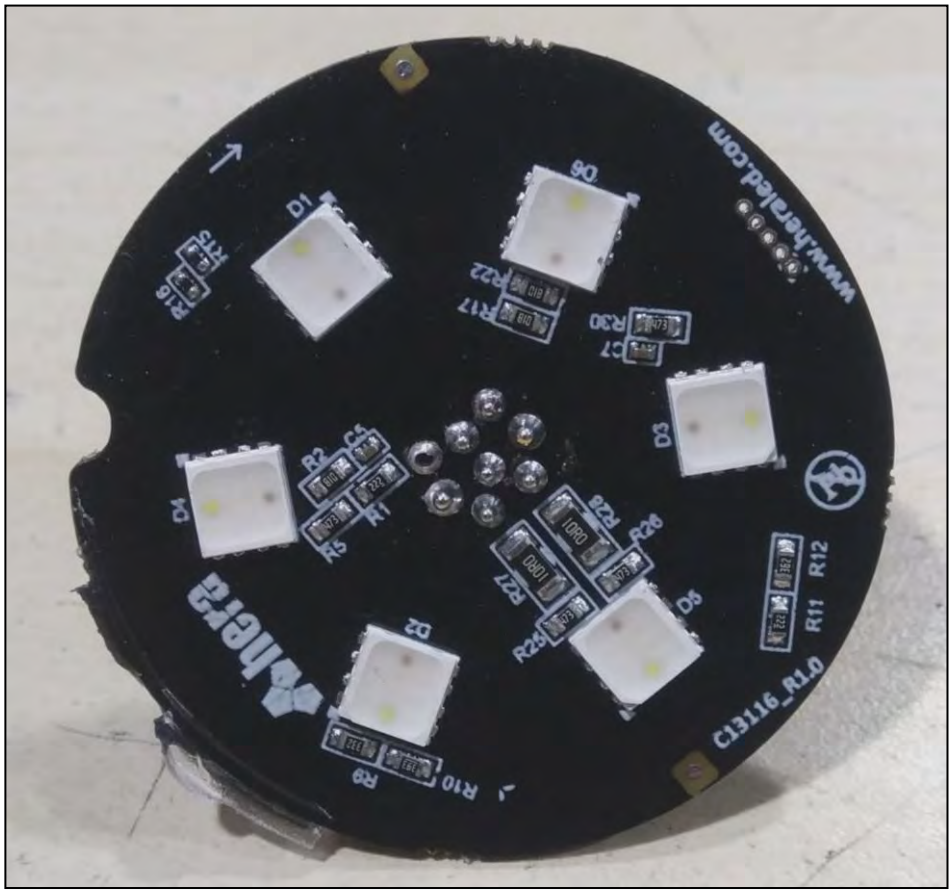

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Clause	Requirement + Test	Result - Remark	Verdict