



CGS TEST HİZMETLERİ TEKNİK KONTROL VE BELGELENDİRME ANONİM ŞİRKETİ



Oruçreis Mahallesi Tekstilkent Caddesi
Tekstilkent A21 10/1 102 Esenler
İstanbul/TURKİYE
Deney Raporu
Test Report

LVD-196-15
2019-02

Müşterinin adı /adres: Customer name/address	HERA EĞLENCE VE MİMARİ AYDINLATMA SİSTEMLERİ A.Ş./Gullubaglar Mah. Kahramanlar Cad. No:3-1 34906 Pendik / İstanbul / Turkey
İstek Numarası: Order no.	09112018ebb2
Numunenin Adı ve Tanımı: Name and identity of test item	P01004085 PD60S-RGB 3Ch DMX Direct View Pixel Dot ; Dış Mekan Aydınlatma Armatürü / Outdoor Luminaires
Numunenin Kabul tarihi: The date of receipt of test item	2018-11-10
Açıklamalar: Remarks	Ürün ilgili testlerden geçmiştir, lütfen raporu inceleyiniz. / The product passes related tests, see report below.
Deneyin yapıldığı tarih: Date of Test	2018-12-03 to 2018-12-05
Deney Standartı Test Standard	EN 60950-22:2006+AC:2008
Raporun Sayfa Sayısı: Number of pages of the Report	19 sayfa/pages

Tarih
Date

2019-02-12

Deney Sorumlusu
Person in charge of test

Timur GÜSER

Laboratuvar Müdürü
Head of Testing Laboratory

Timur GÜSER



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TEST REPORT
IEC 60950-22
Information technology equipment
Safety – Part 22: Equipment to be installed outdoors

Report Reference No.....	LVD-196-15
Date of issue	2019-02-12
Total number of pages.....	Test Report: 17 pages Annex 1 (Equipment of measurements) : 1 page Annex 2 (Photo documentation) : 2 page
Testing Laboratory.....	CGS TEST HİZMETLERİ TEKNİK KONTROL VE BELGELENDİRME ANONİM ŞİRKETİ
Address.....	Oruçreis Mahallesi Tekstilkent Caddesi Tekstilkent A21 10/I 102 Esenler İstanbul/TURKİYE
Testing location	CGS TEST HİZMETLERİ TEKNİK KONTROL VE BELGELENDİRME ANONİM ŞİRKETİ
Address	Oruçreis Mahallesi Tekstilkent Caddesi Tekstilkent A21 10/I 102 Esenler İstanbul/TURKİYE
Applicant's name	:HERA EĞLENCE VE MİMARİ AYDINLATMA SİSTEMLERİ A.Ş.
Address.....	:Gullubaglar Mah. Kahramanlar Cad. No:3-1 34906 Pendik / Istanbul / Turkey
Test specification:	
Standard	EN 60950-22:2006+A11:2008
Test procedure.....	Type Test
Non-standard test method.....	N/A
Test Report Form No.	F510_20_R1.0
Test Report Form(s) Originator	The Standards Institution of Israel Ltd.
Master TRF	Dated 2007-03
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Test item description.....	OUTDOOR LUMINAIRES
Trade Mark	
Manufacturer.....	:HERA EĞLENCE VE MİMARİ AYDINLATMA SİSTEMLERİ A.Ş.
Model/Type reference.....	:P01004085 PD60S-RGB 3Ch DMX Direct View Pixel Dot
Ratings.....	: 48V d.c. ; 0,09A max. ; 4,3W max.

Summary of testing:

Tests performed (name of test and test clause):

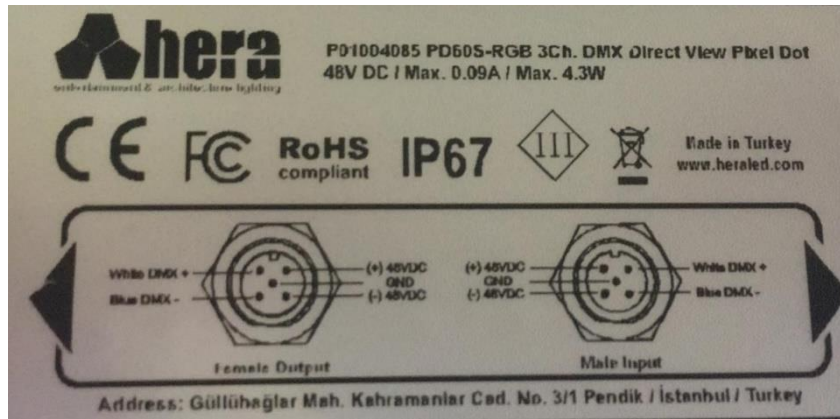
EN/IEC 60529 IP67 test

Testing location:

CGS TEST HİZMETLERİ TEKNİK KONTROL VE BELGELENDİRME ANONİM ŞİRKETİ
Oruçreis Mahallesi Tekstilkent Caddesi
Tekstilkent A21 10/I 102 Esenler
İstanbul/TURKİYE

Summary of compliance with National Differences:

Copy of marking plate



Test item particulars	: Outdoor Luminaires
Temperature range.....	: -40°C.....+50°C
Overvoltage category.....	: <input checked="" type="checkbox"/> OVC I <input type="checkbox"/> OVC II <input type="checkbox"/> OVC III <input type="checkbox"/> OVC IV
IP protection class	: IP67
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.....	: 2018-11-10
Date (s) of performance of tests.....	: 2018-12-03 to 2018-12-05
General remarks:	
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 testing laboratory. "(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 point is used as the decimal separator.	
This Test Report Form is intended for the investigation of safety of equipment to be installed outdoors in accordance with IEC 60950-22. It can only be used together with the IEC 60950-1 requirements.	

4	CONDITIONS FOR OUTDOOR EQUIPMENT		P
4.1	Ambient air temperature		P
	Suitability for use at any temperature in the range specified by the manufacturer. If not specified by the manufacturer, the range is taken as -33°C to +40°C	T _a =-40°C...50°C	P
4.2	AC mains supply		N/A
	Suitability for the highest Overvoltage Category expected in the installation location	Not connected to AC main supply	N/A
	Components used to reduce the Overvoltage Category comply with IEC 61643-series		N/A
	Reference to installation instructions	---	N/A
4.3	Rise of earth potential		N/A
	Special earthing conditions	Class III, no earthing	N/A
	Reference to installation instructions		N/A
5	MARKING AND INSTRUCTIONS		P
	Special installation features for protection from conditions in the OUTDOOR LOCATION (see 1.7.2 of IEC 60950-1)		P
	OUTDOOR ENCLOSURE classification according to IEC 60529 (IP Code)	IP67	P

6	PROTECTION FROM ELECTRICAL SHOCK IN AN OUTDOOR LOCATION		P
6.1	Voltage limits of user-accessible parts in OUTDOOR LOCATIONS (2.2.2 and 2.2.3 of IEC 60950-1 with voltage limits of IEC60950-22)		P
	Voltages under normal conditions (V).....	Accessible voltages do not exceed 48VDC	P
	Voltages under fault conditions (V)		N/A
6.2	Limited current circuits in outdoor locations		N/A
	The requirements of 2.4 of IEC60950-1 apply without change	Class III equipment	N/A
7	WIRING TERMINALS FOR CONNECTION OF EXTERNAL CONDUCTORS		N/A
	The mains supply terminations powered via the normal building installation wiring are as specified in 3.3 of IEC 60950-1		N/A
	The mains supply terminations powered directly from the mains distribution system are as specified in IEC 60364		N/A
8	CONSTRUCTION REQUIREMENTS FOR OUTDOOR ENCLOSURES		P
8.1	General		P
	Protection against corrosion by use of suitable materials or by application of a protective coating		N/A

	Parts serving as a functional part of an OUTDOOR ENCLOSURE (e.g., dials, connectors, etc.) comply with the same environmental protection requirements as for the OUTDOOR ENCLOSURE		P
	Use of OUTDOOR ENCLOSURE to carry current during normal operation		N/A
	Connection of a conductive part of an OUTDOOR ENCLOSURE to protective earth for carrying fault currents (see 2.6 of IEC 60950-1 and 8.3 of this standard)		N/A
8.2	Resistance to ultra-violet radiation		N/A
	Resistance of non-metallic parts of an outdoor ENCLOSURE to degradation by ultra-violet (UV) radiation		N/A
	Parts providing mechanical support:		N/A
	Tensile strength test (ISO 527)		N/A
	Flexural strength test (ISO 178)		N/A
	Parts providing impact resistance:		N/A
	Charpy impact test (ISO 179)		N/A
	Izod impact test (ISO 180)		N/A
	Tensile impact test (ISO 8256)		N/A
	All parts:		N/A
	Flammability classification (1.2.12 and annex A of IEC 60950-1)		N/A
8.3	Resistance to corrosion		N/A
8.3.1	General		N/A
	Resistance of metallic parts of an OUTDOOR ENCLOSURE to the effects of water-borne contaminants		N/A
	Alternate method for 8.3.2-8.3.4 (IEC 61587-1)		N/A
8.3.2	Test apparatus		N/A
	Salt-spray test (IEC 60068-2-11)		N/A
	Test in a water-saturated sulphur dioxide atmosphere (water-saturated sulphur dioxide atmosphere as described in Annex A; chamber as described in ISO 3231)		N/A
8.3.3	Test procedure		N/A
8.3.4	Compliance criteria		N/A
8.4	Bottoms of FIRE ENCLOSURES		N/A
	Comply with 4.6.2 of IEC 60950-1		N/A
	Bottom of FIRE ENCLOSURE of OUTDOOR EQUIPMENT mounted directly and permanently on a non-combustible surface (e.g., concrete or metal)		N/A
8.5	Gaskets		N/A

	If gaskets are used as the method for protection against the ingress of potential contaminants, requirements of 8.5.1 through 8.5.3 apply	No gaskets	N/A
8.5.1	General		N/A
8.5.2	Oil resistance		N/A
8.5.3	Securing means		N/A

9	PROTECTION OF EQUIPMENT WITHIN AN OUTDOOR ENCLOSURE		P
9.1	Protection from moisture (see Table 2)	Unit was tested for IPX7 with acceptable results, detachable protective covers were installed in place.	P
9.2	Protection from plants and vermin	Evaluated by inspection, enclosure prevents ingress of plants and vermin	P
9.3	Protection from excessive dust	Unit was tested for IP6X with acceptable results, detachable protective covers were installed in place. No access to dangerous areas	P
10	MECHANICAL STRENGTH OF ENCLOSURES		P
10.1	General	Plastic enclosure is of adequate mechanical strength	P
10.2	Impact test (4.2.5 of IEC 60950-1)	There was no adverse effect	P
	Compliance criteria:		P
	- after test the level of protection remains in accordance with 9.1 of this standard		P
	- after test the requirements of 4.2.1 of IEC 60950-1 are met		P
11	OUTDOOR EQUIPMENT CONTAINING VENTED BATTERIES		N/A
	Adequate ventilation in the compartment housing a vented battery, where gassing is possible during normal usage or over-charging	No batteries	N/A
	Protection against the risk of ignition of local concentrations of hydrogen and oxygen in a compartment containing both a battery and electrical components		N/A
	Hydrogen gas concentration measurement test		N/A
	Measured hydrogen gas concentration (% by volume)		—
	Max. allowed gas concentration for the mixture location in proximity to an ignition source (% by volume)		—
	Max. allowed gas concentration for the mixture location not in proximity to an ignition source (% by volume)		—

	Overcharging of rechargeable battery (see 4.3.8 of IEC 60950-1)		N/A
A	ANNEX A, WATER-SATURATED SULPHUR DIOXIDE ATMOSPHERE (see 8.3.2 and 8.3.3)		N/A
B	ANNEX B, WATER SPRAY TEST (see 9.1)		N/A

C	ANNEX C, ULTRAVIOLET LIGHT CONDITIONING TEST (see 8.2)		N/A
C.1	Test apparatus		N/A
C.2	Mounting of test samples		N/A
C.3	Carbon-arc light-exposure apparatus		N/A
C.4	Xenon-arc light-exposure apparatus.....		N/A
D	ANNEX D, GASKET TESTS (see 8.5)		N/A
D.1	Gasket tests		N/A
D.2	Tensile strength and elongation tests (for gaskets that can stretch)		N/A
	Tensile strength (%)		N/A
	Elongation (%)		N/A
	Visible deterioration, deformation, melting, cracking or hardening of the material		N/A
D.3	Compression test (for gaskets with closed cell construction)		N/A
	Initial thickness of the specimen (mm)		N/A

	Thickness of the specimen after test a) (mm), compression set after test a) (%).....		N/A
	Thickness of the specimen after test b) (mm), compression set after test b) (%).....		N/A
	Thickness of the specimen after test c) (mm), compression set after test c) (%)		N/A
	Visible cracks or deterioration		N/A
D.4	Oil immersion test		N/A
	Swelling (%).....		N/A
	Shrinking (%)		N/A

E	ANNEX E, RATIONALE		—
E.1	General		—
E.2	Electric shock		—
E.3	Energy related hazards		—
E.4	Fire		—
E.5	Mechanical hazards		—
E.6	Heat related hazards		—
E.7	Radiation		—
E.8	Chemical hazards		—
E.9	Biological hazards		—
E.10	Explosion hazards		—

Conditioning for Set 2 of samples (including Annex C)..... :				—
Test method (according to Table 1 of ISO 180) :				—
Test conditions (T °C, RH %)..... :				—
Set 1 (without Annex C conditioning)		Set 2 (after Annex C conditioning)		
Test sample #	Izod impact strength (kJ/m ²)	Test sample #	Izod impact strength (kJ/m ²)	
Arithmetic mean for Set 1 (kJ/m ²)..... :				
Arithmetic mean for Set 2 (kJ/m ²)..... :				
Retention (%)..... :				
Supplementary information:				

8.2	TABLE: Resistance to ultra-violet radiation		
8.2h)	Tensile impact test (ISO 8256) - notched		N/A
Material identification (manufacturer, type designation)			—
Shape and dimensions of test samples			—
Conditioning for Set 1 of samples			—
Conditioning for Set 2 of samples (including Annex C).....			—
Test method (A or B)			—
Test conditions (T °C, RH %).....			—
Set 1 (without Annex C conditioning)		Set 2 (after Annex C conditioning)	
Test sample #	Tensile impact strength (kJ/m ²)	Test sample #	Tensile impact strength (kJ/m ²)
Arithmetic mean for Set 1 (kJ/m ²).....			
Arithmetic mean for Set 2 (kJ/m ²).....			
Retention (%)			
Supplementary information:			

ANNEX 1 Equipment of measurements

Equipment No	Kind of equipment	Model Type	Manufacturer	Last Cal Date	Next Cal Date	Last Ver Date	Next Ver Date	Test Clause
E-001	CE COMPACT TESTER	MI2094	METREL	15.03.2018	15.03.2019	---	---	---
E-011	Multimeter	UT61B	UNI-T	29.09.2018	29.09.2019	---	---	---
E-033	Temperature- Humidity Meter	30.3166.02.S2	TFA	28.09.2018	28.09.2019	---	---	---
E-052	IPX5/X6 Test equipment	MSTN-2	MULTITECH	28.03.2018	28.03.2019	---	---	---
E-006	Dust cabinet	---	ULMEKA MEKATRONİK	---	---	---	---	---

ANNEX 2 Photo Documentation

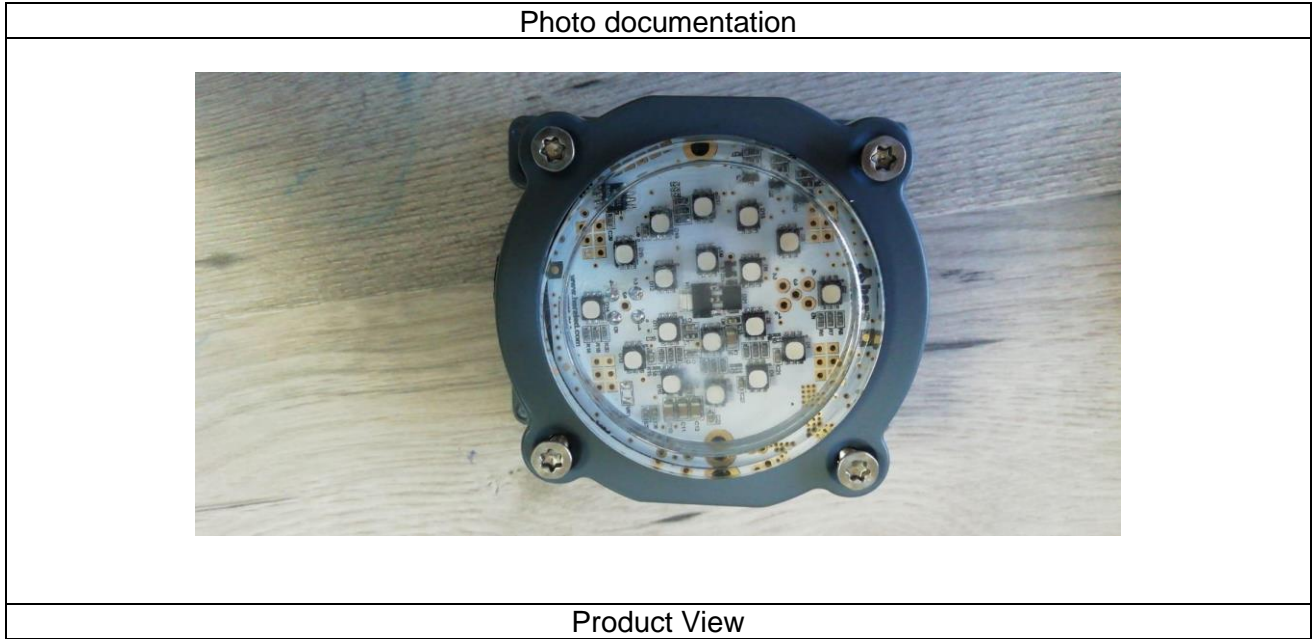
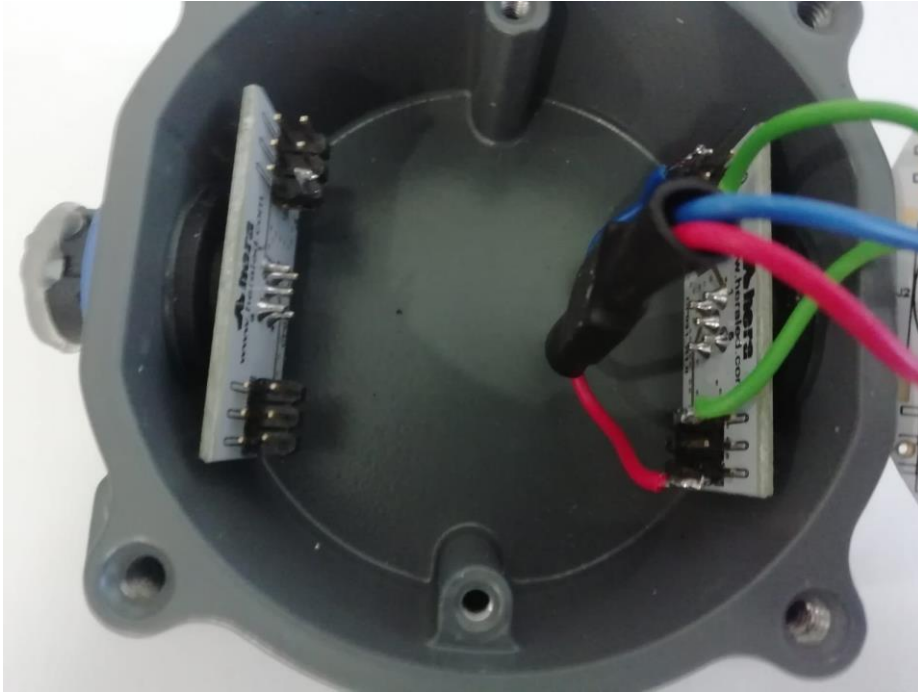
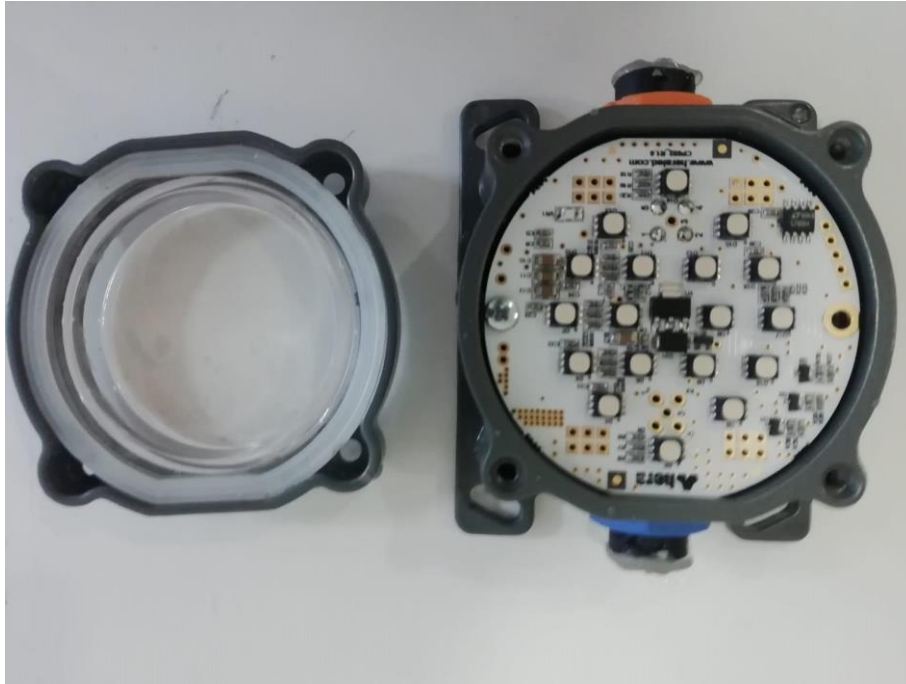


Photo documentation



Product View



Product View