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Technical Competence - Testing



TÜVRheinland®

Test report - Products
Prüfbericht - Produkte

Test Report No.: <i>Prüfbericht-Nr.:</i>	AU21VRXC 001	Order No.: <i>Auftrags-Nr.:</i>	252103517	Page 1 of 11 <i>Seite 1 von 11</i>	
Client Reference No.: <i>Kunden-Referenz-Nr.:</i>	2071295	Order date: <i>Auftragsdatum:</i>	17-Jun-2021		
Client: <i>Auftraggeber:</i>	Advanced Lighting Technologies Australia Inc. 110 Lewis Road, Wantirna South, VIC 3152, Australia				
Test item: <i>Prüfgegenstand:</i>	Lunio Series LED Light				
Identification / Type No.: <i>Bezeichnung / Typ-Nr.:</i>	Refer to page 2				
Order content.: <i>Auftrags-Inhalt:</i>	Lamp Circuit Power (LCP) Measurement				
Test specification: <i>Prüfgrundlage:</i>	Refer to page 3				
Date of sample receipt: <i>Wareneingangsdatum:</i>	17-Jun-2021				
Test sample No.: <i>Prüfmuster-Nr.:</i>	A003074049-001 to A003074049-010				
Testing period: <i>Prüfzeitraum:</i>	17-Jun-2021 to 29-Jun-2021				
Place of testing: <i>Ort der Prüfung:</i>	TUV Rheinland Australia Pty Ltd				
Testing laboratory: <i>Prüflaboratorium:</i>	TUV Rheinland Australia Pty Ltd				
Test result*: <i>Prüfergebnis*:</i>	Samples were submitted for measurement only, no compliance limits				
reviewed by / überprüft von:		authorized by / genehmigt von:			
29-Jun-2021	Sathvik Varma P. / Test Engineer	29-Jun-2021	Daniel Ngo / Reviewer		
Date <i>Datum</i>	Name / Position <i>Name / Stellung</i>	Signature <i>Unterschrift</i>	Date <i>Datum</i>	Name / Position <i>Name / Stellung</i>	Signature <i>Unterschrift</i>
Other / Sonstiges:					
- Power consumption measurement at rated voltage for AEMO (Australian Energy Market Operator) at lab condition (Ambient (20±5)°C, Relative Humidity (45–75)%).					
Condition of the test item at delivery: <i>Zustand des Prüfgegenstandes bei Anlieferung:</i>		New samples, no damage			
* Legend:	P(ass) = passed a.m. test specification(s)	F(ail) = failed a.m. test specification(s)	N/A = not applicable	N/T = not tested	
Legende:	P(ass) = entspricht o.g. Prüfgrundlage(n)	F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet	
This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark. <i>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.</i>					

Test Report

General remarks:

1. This report shall not be reproduced, except in full.
2. Details in test data / test plan no. 252103517.
3. Reporting of results herein is in accordance with NATA recommendations taking into account U of M.
 - (a) For minimum limits - Where measurement is on the limit or above the limit it is deemed to comply. Where measurement is below the limit it is deemed not to comply.
 - (b) For maximum limits - Where measurement is on the limit or below the limit it is deemed to comply. Where measurement is above the limit it is deemed not to comply.
4. For reporting of results the estimated uncertainty for measurement taken into account at 95% confidence level.
5. This test report is based on assessment and tests applied to the specific test item(s) as submitted by the client.
6. TÜV Rheinland Australia disclaims any and all responsibility or obligation for any other item.
7. LCP test was conducted on 10 fittings as per requested schemes.
8. Tests were conducted on submitted sample model **AL735230R-C12-DALIAO** as representative for model series fitted with PE cell and model **AL735230-C12-DALIAO** as representative for model series without PE cell.

Description of the test item:

Tradename: **Advance Lighting Technologies Australia** / Manufacturer: **ARCLUCE**. Model / type number: **AL*35*******; Rating: 220-240V, 50/60Hz, 35W, IP66; Class II. The urban lighting with stylish touch LUNIO7 is the post-top luminaire comprises of double insulated construction, LED modules, PE cell fitted to NEMA base and a LED programmable driver (brand: MILANO in; Model: 40W/200-1050 4PN; Input: 220-240Vac, 50/60Hz; Output: 15-56Vdc 200-1050mA, 40W; $\lambda \geq 0.95$, $t_a = -40^\circ\text{C}$ to 60°C ; $t_c = 80^\circ\text{C}$).

Model **AL*35******* is represented as below:

The first star * represents the style of luminaire. It may up to 1 character as below:

- S** – Lunio street
- 7** – Lunio 7

The second star * represents the LED optic type. It may be up to 2 characters as below:

- 2, 3, 4** or **5S**

The third star * represents the colour temperature of LEDs. It may be up to 3 characters as below:

- 30K** – LEDs with CCT 3000K
- 40K** – LEDs with CCT 4000K

The fourth star * represents as below:

- R** – Light fitted with PE cell
- “Blank”** – Light without PE cell

The fifth star * represents the quality of paints as below:

- C** – Light have coastal paint
- .** – Light does not have coast paint

The sixth star * represents the colour of the light housing. It may be up to 2 characters as below:

- 12** - Black
- 16** – Grey
- 21** – Aluminium

The seventh star * represents the dimming function as below:

- DALI** – dimmable
- CEI** – non-dimmable

The eighth star * represents as below:

- AO** – Light is listed for AEMO NEM load table

Options/accessories/ancillary equipment:

The equipment was tested without any optional accessory installed. Hence, this report does not cover parameters that are influenced by the installation of optional accessory that might affect safety in the meaning of this standard.

Uncertainty of equipment used:

Equipment	Equipment No.	Range used	Uncertainty	Calibration Due Date
Digital Power Meter Model: WT310	MEL-1464	Voltage: 200V - 300V	±0.2V	12-Apr-2022
		Current: 75mA – 100mA	±0.1mA	
		Power: 115mW – 4.6kW	±2.5%	
		Power Factor: 1	±0.001pf	

Test procedure:

The submitted test samples (consisted of the supplied lamp and control gear combination, if applicable) for the lamp circuit power consumption measurement were placed in a draught free room and at the laboratory condition (Ambient (20±5)°C, Relative Humidity (45–75)%) for 24 hours before and during the measurement. The test samples were connected to the power source and supplied with voltage and frequency as listed in "TABLE: Power Measurement". The test samples were operated until the conditions of overall temperature equilibrium were established or at least 4 hours in stabilized operation with the supplied sources. Then the total power consumption measurements have been taken by power meter.

TABLE: Power Measurement						
	Test Item	Supplied Voltage (V)	Frequency (Hz)	Measured Input Power (W)	Measured Input Current (mA)	Power Factor
1	AL735230R-C12-DALIAO	250.08	50	36.160	147.98	0.9771
2	AL735230R-C12-DALIAO	250.24	50	36.246	148.10	0.9780
3	AL735230R-C12-DALIAO	250.14	50	36.393	148.50	0.9798
4	AL735230R-C12-DALIAO	250.25	50	36.147	147.38	0.9801
5	AL735230R-C12-DALIAO	250.11	50	36.145	147.65	0.9788
6	AL735230R-C12-DALIAO	250.02	50	36.067	147.17	0.9802
7	AL735230R-C12-DALIAO	250.00	50	36.494	148.91	0.9803
8	AL735230R-C12-DALIAO	250.01	50	36.206	148.08	0.9780
9	AL735230R-C12-DALIAO	250.11	50	36.071	147.61	0.9771
10	AL735230R-C12-DALIAO	250.02	50	36.237	147.87	0.9802
Average		250.098	50	36.217	147.925	0.9790

TABLE: Power Measurement						
	Test Item	Supplied Voltage (V)	Frequency (Hz)	Measured Input Power (W)	Measured Input Current (mA)	Power Factor
1	AL735230-C12-DALIAO	250.17	50	35.878	147.01	0.9755
2	AL735230-C12-DALIAO	250.00	50	36.045	147.48	0.9776
3	AL735230-C12-DALIAO	250.00	50	36.117	147.62	0.9787
4	AL735230-C12-DALIAO	250.15	50	35.934	146.79	0.9786
5	AL735230-C12-DALIAO	250.20	50	35.905	146.70	0.9782
6	AL735230-C12-DALIAO	250.27	50	35.803	146.11	0.9791
7	AL735230-C12-DALIAO	250.12	50	36.268	148.06	0.9793
8	AL735230-C12-DALIAO	250.02	50	35.915	146.99	0.9773
9	AL735230-C12-DALIAO	250.00	50	35.766	146.46	0.9768
10	AL735230-C12-DALIAO	250.25	50	35.948	146.60	0.9799
Average		250.118	50	35.958	146.982	0.9781

Markings



Advanced
LIGHTING TECHNOLOGIES

ARCLUCE 

Prod.: AL735230R-C12-DALIAO

Made in ITALY

WORK ORDER 43491

DATE 17/06/2021



N1790

Rating label for street light model fitted with PE cell



Advanced
LIGHTING TECHNOLOGIES

ARCLUCE 

Prod.: AL735230-C12-DALIAO

Made in ITALY

WORK ORDER 43491

DATE 17/06/2021

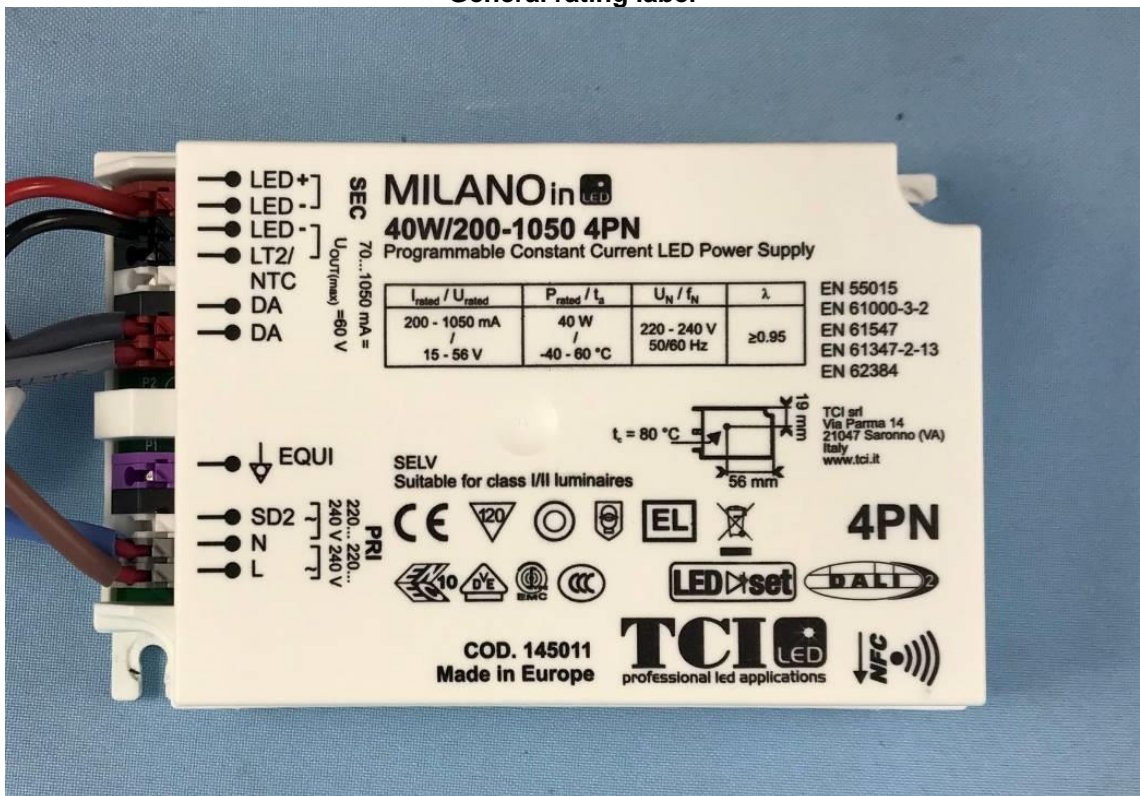


N1790

Rating label for street light model without PE cell



General rating label



LED programmable driver marking

Photos



Product overview – bottom



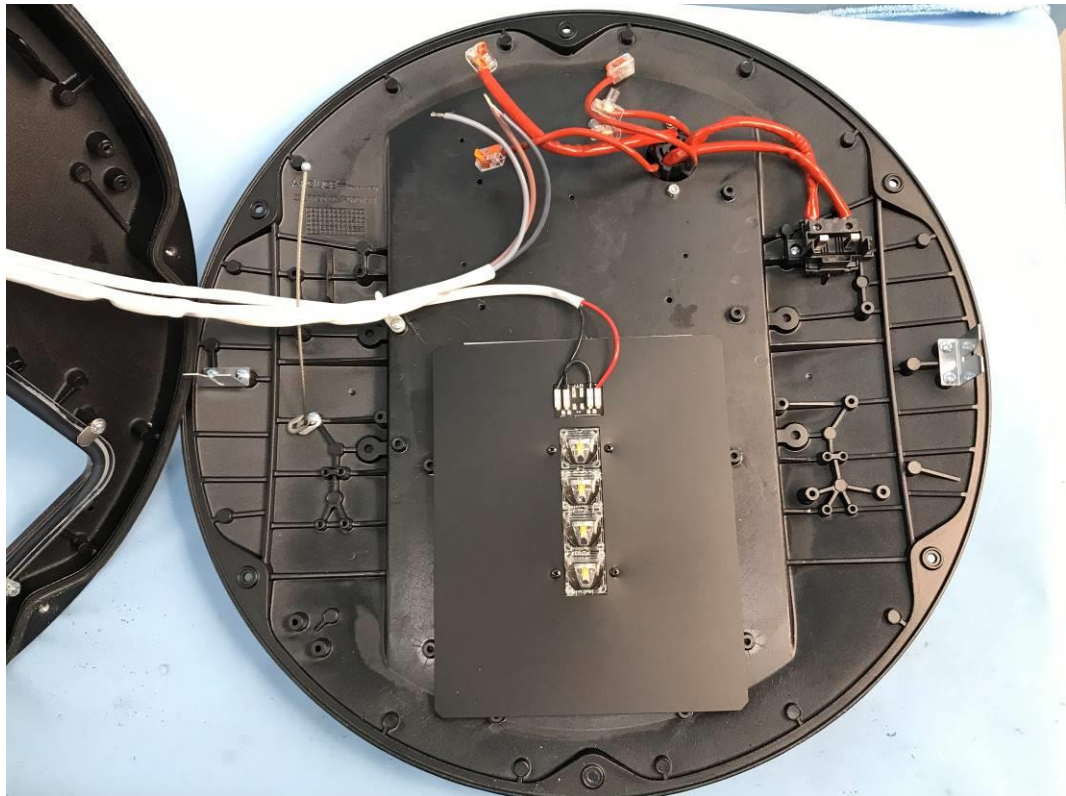
Product overview – top



Product fitted with PE cell



Mains Electrical Connection Compartment



LEDs Connection Compartment



LED modules overview



PE cell overview



PE cell overview



PE cell overview

End of the Test Report