

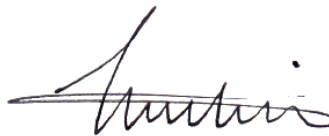
T e s t R e p o r t

Report No : Cer1579-051216B
Client: : TRT Lighting Ltd
Unit 1,
Target Park,
Shawbank Road,
Redditch,
RG24 8GG
Description : LM-290-101-1-32LED
Manufacturer : TRT Lighting Ltd
Type/Model : LM-290-101-1-32LED
Test Specification : Measurement of power consumption in accordance with the
'Unmetered Supplies Operational Information Document' –
Version 15.0 (15/06/2016)
Date Testing Started : 01/12/2016
Conclusion : Refer to body of report
Date of Issue : 09/12/2016
Date of Expiry : 08/12/2021

Checked by: J.ADAMS
Position: Accreditation &
Certification Officer



Approved by: T.MALIK
Position: Operations & Quality
Manager



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INTRODUCTION

The products identified in Table 1, were tested at the premises of TRT Lighting Ltd for measurement of power consumption in accordance with the 'Unmetered Supplies Operational Information Document' – Version 15.0 (15/06/2016).

PRODUCT A DETAILS

Table 1. Test Sample Details

Product Description	LM-290-101-1-32LED
Model No.	LM-290-101-1-32LED
Number of Samples	Five
Condition on Receipt	Good
Nominal Dimensions	101mm x 290mm x 5mm
Product Supply Requirement	240V 50Hz
Lamp Type and Power	LED
Sampling Method: Test samples selected and supplied by client, no sampling method specified by client.	

The customer has declared that the equipment load does not vary with ambient temperature.

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PRODUCT A RESULTS

Table 2. *Wattage and VA results for LM-290-101-1-32LED*

Operating Mode	700mA				
Watts					
Voltage	Sample Number				
	1	2	3	4	5
210	71.08	70.74	70.69	69.99	70.66
220	70.94	70.60	70.55	69.79	70.51
230	70.86	70.52	70.47	69.71	70.41
240	70.70	70.36	70.29	69.21	70.22
250	70.60	70.25	70.28	69.54	70.25
VA					
Voltage	Sample Number				
	1	2	3	4	5
210	71.68	71.38	71.32	70.61	71.31
220	71.70	71.39	71.33	70.59	71.30
230	71.80	71.50	71.43	70.70	71.40
240	71.85	71.58	71.49	70.75	71.45
250	72.02	71.75	71.75	71.05	71.73
Power Factor					
Voltage	Sample Number				
	1	2	3	4	5
210	0.99	0.99	0.99	0.99	0.99
220	0.99	0.99	0.99	0.99	0.99
230	0.99	0.99	0.99	0.99	0.99
240	0.98	0.98	0.98	0.98	0.98
250	0.98	0.98	0.98	0.98	0.98
Ambient Temperature During Test (°C)			25.02		
PF Leading/Lagging			Leading		

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Table 3. Wattage and VA results for LM-290-101-1-32LED

Operating Mode	550mA				
Watts					
Voltage	Sample Number				
	1	2	3	4	5
210	56.10	55.71	55.66	54.99	55.68
220	56.05	55.69	55.64	54.95	55.65
230	56.04	55.69	55.64	54.97	55.67
240	56.01	55.66	55.62	54.95	55.64
250	56.07	55.71	55.65	54.98	55.66
VA					
Voltage	Sample Number				
	1	2	3	4	5
210	56.96	56.64	56.55	55.91	56.59
220	57.13	56.84	56.77	56.11	56.78
230	57.34	57.07	56.99	56.35	57.04
240	57.59	57.34	57.27	56.64	57.30
250	57.95	57.70	57.60	56.97	57.61
Power Factor					
Voltage	Sample Number				
	1	2	3	4	5
210	0.98	0.98	0.98	0.98	0.98
220	0.98	0.98	0.98	0.98	0.98
230	0.98	0.98	0.98	0.98	0.98
240	0.97	0.97	0.97	0.97	0.97
250	0.97	0.97	0.97	0.97	0.97
Ambient Temperature During Test (°C)			25		
PF Leading/Lagging			Leading		

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Table 4. Wattage and VA results for LM-290-101-1-32LED

Operating Mode	400mA				
Watts					
Voltage	Sample Number				
	1	2	3	4	5
210	41.82	41.45	41.40	40.82	41.49
220	41.85	41.48	41.43	40.84	41.50
230	41.91	41.51	41.46	40.90	41.56
240	41.86	41.47	41.41	40.83	41.47
250	41.87	41.48	41.42	41.84	41.50
VA					
Voltage	Sample Number				
	1	2	3	4	5
210	43.09	42.79	42.71	42.16	42.82
220	43.41	43.13	43.05	42.50	43.14
230	43.77	43.50	43.40	42.88	43.51
240	44.12	43.84	43.74	43.21	43.82
250	44.58	44.35	44.21	43.70	44.31
Power Factor					
Voltage	Sample Number				
	1	2	3	4	5
210	0.97	0.97	0.97	0.97	0.97
220	0.96	0.96	0.96	0.96	0.96
230	0.96	0.95	0.96	0.95	0.96
240	0.95	0.95	0.95	0.94	0.95
250	0.94	0.94	0.94	0.96	0.94
Ambient Temperature During Test (°C)			25		
PF Leading/Lagging			Leading		

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Table 5. Wattage and VA results for LM-290-101-1-32LED

Operating Mode	250mA				
Watts					
Voltage	Sample Number				
	1	2	3	4	5
210	27.70	27.79	27.23	26.84	27.36
220	27.75	27.35	27.29	26.78	27.41
230	27.79	27.40	27.33	26.83	27.44
240	27.83	27.43	27.37	26.85	27.48
250	27.91	27.51	27.44	26.92	27.55
VA					
Voltage	Sample Number				
	1	2	3	4	5
210	29.71	29.44	29.34	28.89	29.48
220	30.21	29.95	29.81	29.34	29.96
230	30.70	30.47	30.33	29.90	30.47
240	31.25	31.04	30.94	30.51	31.04
250	31.96	31.78	31.62	31.21	31.77
Power Factor					
Voltage	Sample Number				
	1	2	3	4	5
210	0.93	0.94	0.93	0.93	0.93
220	0.92	0.91	0.92	0.91	0.91
230	0.91	0.90	0.90	0.90	0.90
240	0.89	0.88	0.88	0.88	0.89
250	0.87	0.87	0.87	0.86	0.87
Ambient Temperature During Test (°C)			25		
PF Leading/Lagging			Leading		

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Table 6. Wattage and VA results for LM-290-101-1-32LED

Operating Mode	100mA				
Watts					
Voltage	Sample Number				
	1	2	3	4	5
210	13.84	13.55	13.47	13.42	13.62
220	13.96	13.67	13.58	13.52	13.74
230	14.02	13.74	13.66	13.56	13.82
240	14.11	13.85	13.78	13.65	13.93
250	14.21	13.95	13.87	13.73	14.03
VA					
Voltage	Sample Number				
	1	2	3	4	5
210	17.54	17.38	17.24	17.22	17.40
220	18.33	18.19	18.01	17.77	18.21
230	18.95	18.86	18.69	18.45	18.90
240	19.89	19.81	19.63	19.56	19.81
250	20.77	20.70	20.46	20.26	20.70
Power Factor					
Voltage	Sample Number				
	1	2	3	4	5
210	0.79	0.78	0.78	0.78	0.78
220	0.76	0.75	0.75	0.76	0.75
230	0.74	0.73	0.73	0.73	0.73
240	0.71	0.70	0.70	0.70	0.70
250	0.68	0.67	0.68	0.68	0.68
Ambient Temperature During Test (°C)			25		
PF Leading/Lagging			Leading		

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Table 7. Wattage and VA results for LM-290-101-1-32LED

Operating Mode	Standby				
Watts					
Voltage	Sample Number				
	1	2	3	4	5
210	0.77	0.78	0.78	0.79	0.79
220	0.80	0.80	0.81	0.82	0.82
230	0.83	0.85	0.85	0.83	0.85
240	0.86	0.87	0.86	0.89	0.89
250	0.90	0.89	0.89	0.92	0.92
VA					
Voltage	Sample Number				
	1	2	3	4	5
210	8.19	8.40	8.28	8.35	8.36
220	9.05	9.23	9.07	9.15	9.15
230	9.83	10.03	9.89	9.89	9.99
240	10.76	10.95	10.85	10.95	10.87
250	11.54	11.81	11.60	11.72	11.72
Power Factor					
Voltage	Sample Number				
	1	2	3	4	5
210	0.09	0.09	0.09	0.09	0.09
220	0.09	0.09	0.09	0.09	0.09
230	0.08	0.08	0.09	0.08	0.09
240	0.08	0.08	0.08	0.08	0.08
250	0.08	0.08	0.08	0.08	0.08
Ambient Temperature During Test (°C)			25		
PF Leading/Lagging			Leading		

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DEVIATION(S) FROM TEST STANDARD

No reported deviations from test standard.

MEASUREMENT UNCERTAINTY

The following expanded uncertainties apply to the measurements shown in the results;

The Expanded Uncertainties for Active Power (W) measurement for the LED readout are approximately $\pm 2.6\%$ for low power (16W) and $\pm 3.0\%$ (above 100W)

The Expanded Uncertainties for Apparent Power (VA) measurement for the LED readout are approximately $\pm 2.2\%$ for low power (16W) and $\pm 2.6\%$ (above 100W)

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor $k=2$, providing a coverage probability of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.

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ILLUSTRATION

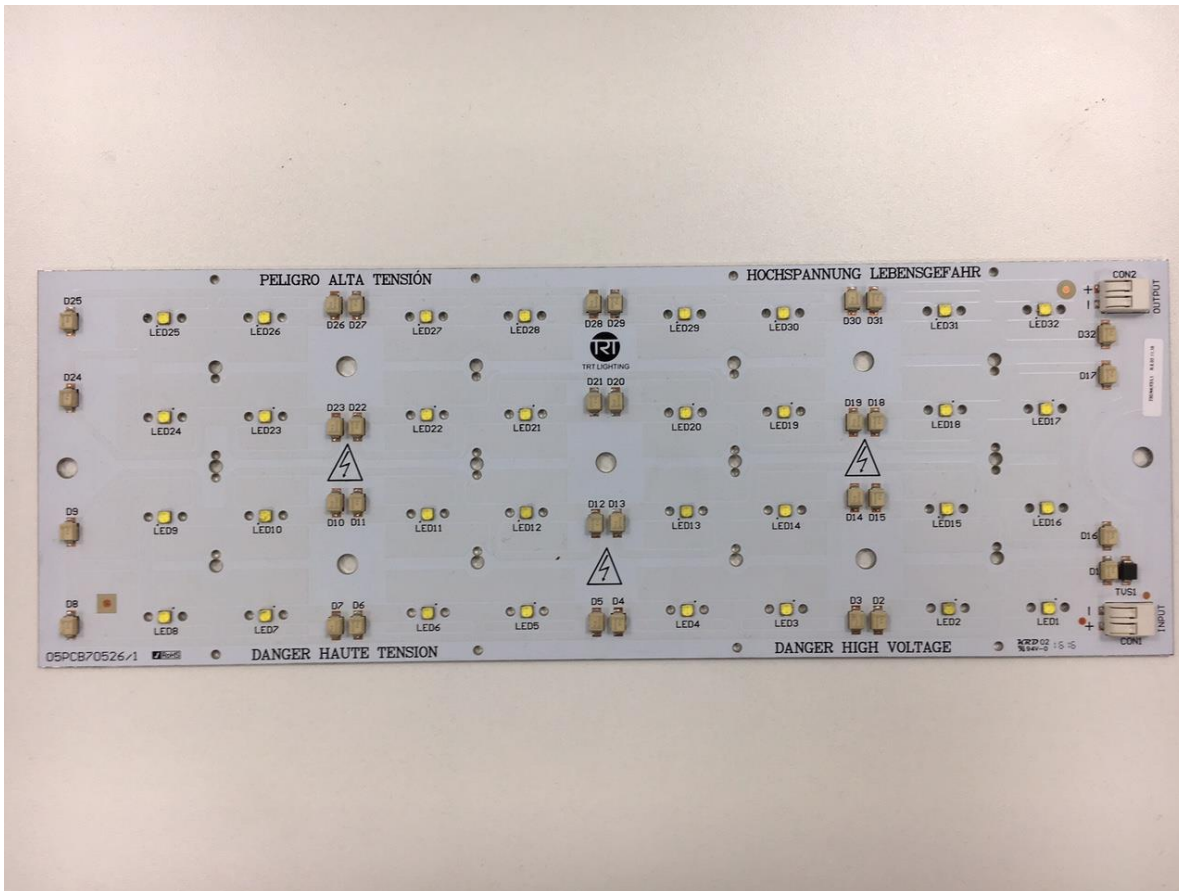


Figure 1. *Product image of model: LM-290-101-1-32LED*

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