

LED Water-Proofing Tube

1. Product Features :

- 270 Degree beam angle,
- Super High CRI – 85 Ra
- High Luminous Efficiency (130 Lm/W)
- Full plastic design for water-proofing (Optional)
- LED with IP (Intelligent Property)
- LED Pass LM80 test
- Super low weight: 4 Ft – 200g, 8 Ft – 400g
- Certification: CE, LVD, BSMI, CNS 15438

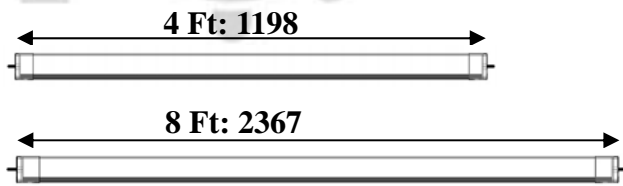


2. Specification :

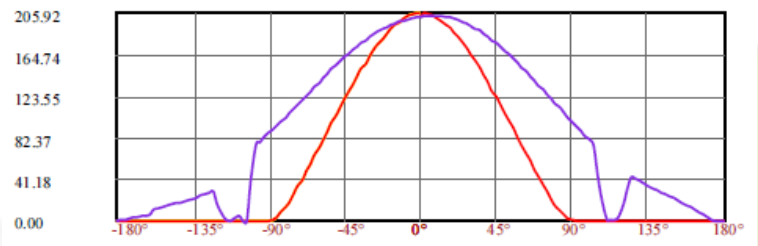
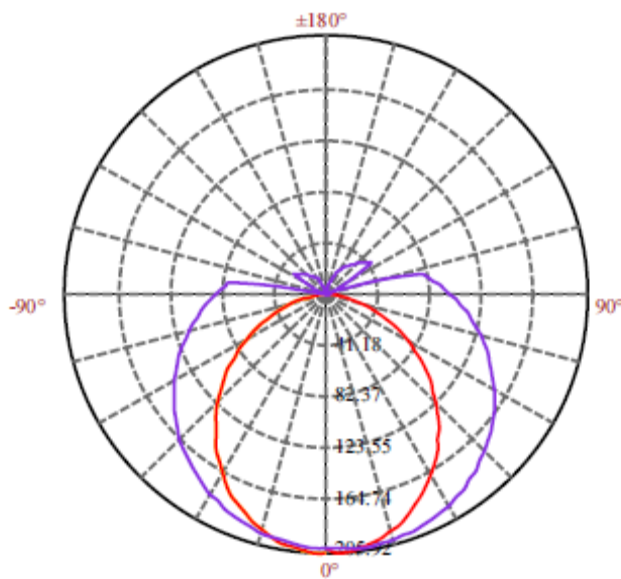
Product Name	LED Tube, 4 Ft	
Model Name	TLN42000-100x	TLN84000-100x
Power Consumption	20W	40W
Luminous Flux	2600 lm	5200 lm
Illuminance(@1M)	500 Lux	600 Lux
Mask	Diffusing	
Beam Angle	270°	
Light Color	Cold White(5300~6500K)/Natural White(4000K)/Warm White(3000K)	
CRI	85 Ra	
Input Voltage	100~240 VAC / 50~60Hz	
Power Factor	0.9@110V, 0.85@230V	
Operating Temp.	0 ~ 40 °C	
Storage Temp	-20 ~ 60 °C	
Life Span	40,000 Hours	
Warranty	4 ft - 200g, 8 ft – 400g	
Product Name	2 Years	

Remarks: The tolerance of related electrical & lighting parameters is 10%. Ex. Power Consumption, Luminance Flux, Illuminance, and CRI

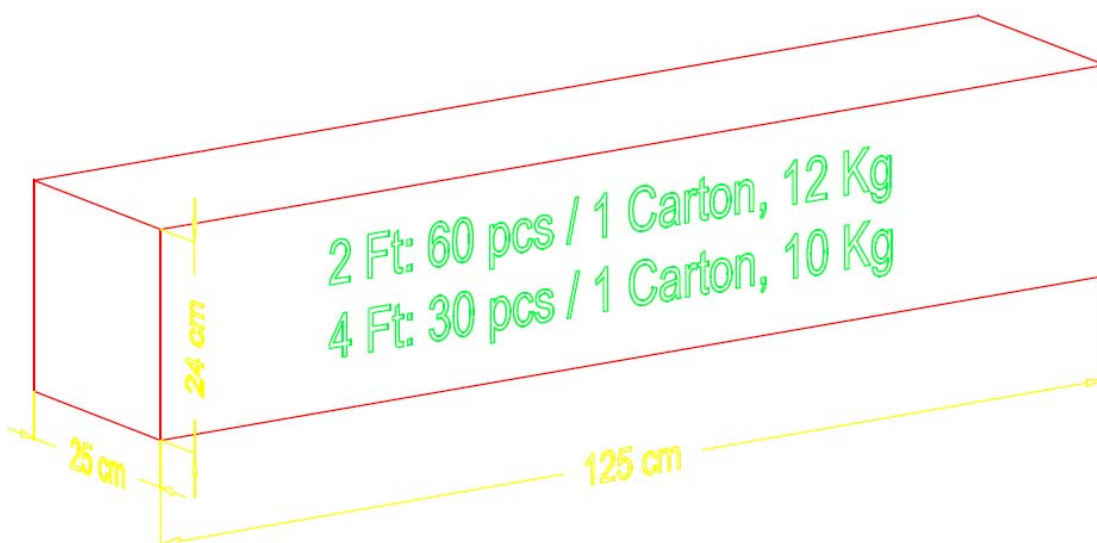
3. Dimension :



4. Distribution Diagram(2 Ft) :



5. Packaging Information :



LanYang Optics Co., Ltd.

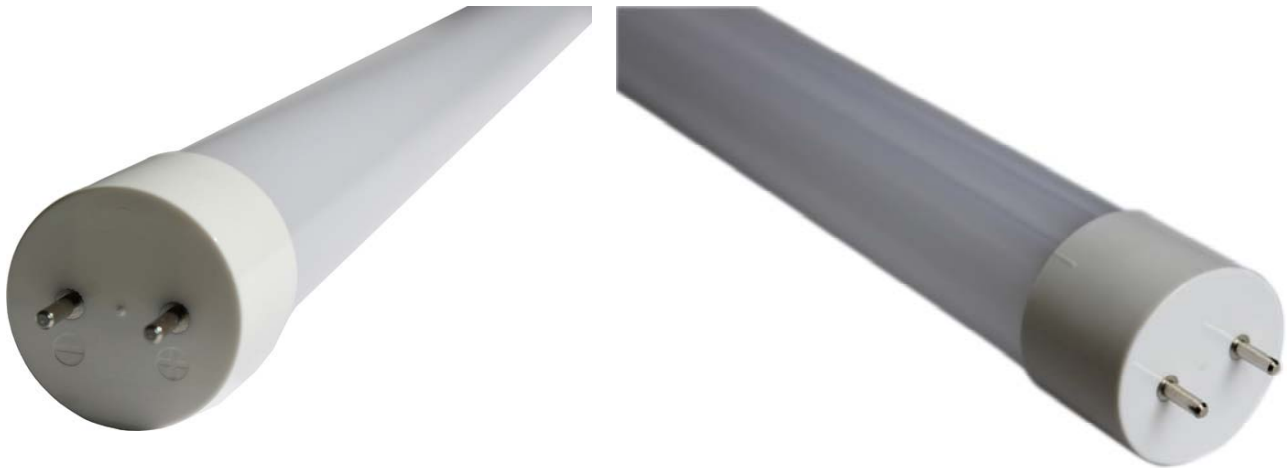
No.9, Ln. 15, Xiangcheng Rd., Dongshan Township,
Yilan County 269, Taiwan (R.O.C.)

Tel: +886-3-9596071 Fax: +886-3-9596797

6. LM80 Test Data :

NO	PKG Info.	CCT	Current	Ts		Date & Last Results						
		[K]	[mA]	[°C]		0	1000	2000	3000	4000	5000	6000
#1	5630HE	2700	65	55	Average Flux Maintenance	100.0%	100.0%	100.5%	100.5%	101.8%	101.4%	
					Average Chromaticity Shift ($\Delta u'v'$)	0.0000	0.0008	0.0010	0.0011	0.0009	0.0009	
				85	Average Flux Maintenance	100.0%	99.3%	99.7%	99.4%	100.5%	99.9%	
					Average Chromaticity Shift ($\Delta u'v'$)	0.0000	0.0010	0.0012	0.0014	0.0013	0.0013	
				95	Average Flux Maintenance	100.0%	98.7%	98.9%	98.4%	99.4%	98.4%	
					Average Chromaticity Shift ($\Delta u'v'$)	0.0000	0.0010	0.0013	0.0015	0.0015	0.0015	
#2			120	55	Average Flux Maintenance	100.0%	100.5%	101.0%	100.6%	101.3%	100.4%	
					Average Chromaticity Shift ($\Delta u'v'$)	0.0000	0.0011	0.0014	0.0015	0.0014	0.0015	
				85	Average Flux Maintenance	100.0%	99.9%	100.1%	99.7%	100.6%	99.6%	
					Average Chromaticity Shift ($\Delta u'v'$)	0.0000	0.0011	0.0014	0.0016	0.0015	0.0014	
				95	Average Flux Maintenance	100.0%	98.9%	99.0%	98.3%	99.1%	97.9%	
					Average Chromaticity Shift ($\Delta u'v'$)	0.0000	0.0012	0.0015	0.0017	0.0016	0.0016	
#3			150	55	Average Flux Maintenance	100.0%	100.7%	100.9%	100.3%	100.9%	100.0%	
					Average Chromaticity Shift ($\Delta u'v'$)	0.0000	0.0012	0.0015	0.0017	0.0016	0.0017	
				85	Average Flux Maintenance	100.0%	99.8%	99.9%	99.4%	100.2%	99.3%	
					Average Chromaticity Shift ($\Delta u'v'$)	0.0000	0.0012	0.0015	0.0017	0.0016	0.0015	
				95	Average Flux Maintenance	100.0%	99.1%	99.1%	98.2%	99.0%	97.6%	
					Average Chromaticity Shift ($\Delta u'v'$)	0.0000	0.0012	0.0015	0.0017	0.0016	0.0016	

7. Product Pictures :



8. LG Guaranty Letter



To: Future Electronics

Re: With regard to Patent Indemnity

Dear Sir or Ma'am

Thank you for considering our LED packages, modules, and engines products ("Products").

We, LG Innotek Co., Ltd, represent and warrant that to the best of our knowledge, the Products manufactured by us and purchased by you from us do not infringe any patent of a third party.

We will defend you against any third-party action, claim, or legal proceeding to the extent that these include a claim that the Products supplied by us directly infringe a third party's patent. We will also indemnify for damages and costs awarded by final judgment or settled and paid by you in such action, claim, or legal proceeding to the extent we are directly and solely attributable to such infringement up to the total amount of the purchase price of the Products, provided that (i) you agree to promptly notify us of any such claim; (ii) you agree to authorize us the right to defend and settle such action, claim, or legal proceeding; (iii) upon our request, you agree to provide us with all reasonable assistance and information related to the defense or settlement of such action, claim, or legal proceeding; and (iv) you do not enter into any settlement that imposes any liability or obligations on us without our prior written consent.

In the event that a court holds or arbitrator(s) decides that a Product is infringing, we may, at our option and sole expense, (i) modify such Product (in a reasonable manner) to be non-infringing; (ii) obtain a license (at no additional expense to you) for you to use such Product; or (iii) replace such Product with the non-infringing Product which will be substantially equivalent to the infringing Product.

Please be informed that we are not liable for any litigation, claim, or other dispute arising from (i) any modification made to the Products by anyone other than us; (ii) our compliance with the specifications or designs, if any, requested or provided by you; or (iii) the operation or use of any Products in combination with other hardware or software not furnished by us.

We appreciate your interest in our Products and we look forward to doing business with you.

Sincerely Yours,


Signed for and on behalf of
LG Innotek Co., Ltd.

Signature : _____

Name : _____




Title: _____

Date: _____


Harry Kang
Vice president
April 3 2012

9. CE Certification :

9.1 EMC

	
VERIFICATION OF COMPLIANCE	
This Verification of Compliance is hereby issued to the product designated below.	
Product	LED Tube
Model	TLNxxxx00-xxxx (Please refer to appendix)
Trade Name	LYO
Applicant	LanYang Optics No.9, Ln. 15, Xiangcheng Rd., Dongshan Township, Yilan County 269, Taiwan (R.O.C.)
Applicable Standard(s)	EN 55015:2006 + A2:2009 EN 61000-3-2:2006+ A2:2009 EN 61000-3-3:2008 EN 61547:2009, including IEC 61000-4-2:2008 IEC 61000-4-3:2006 + A1:2007 + A2:2010 IEC 61000-4-4:2004 + A1:2010 IEC 61000-4-5:2005 IEC 61000-4-6:2008 IEC 61000-4-8:2009 IEC 61000-4-11:2004
Reference No.	T130415D05-E
Test Laboratory	Compliance Certification Services Inc. (Hsin-Chu Lab) NO. 989-1 Wen Shan Rd., Shang Shan Village, Qionglin Shiang Hsinchu County 30741, Taiwan, R.O.C Tel: +886-3-5921698 / Fax: +886-3-5921108
<p>This device has been tested and found to comply with the stated standard(s), which is(are) required by the Council Directive of 2004/108/EC. The test results are indicated in the test report and are applicable only to the tested sample identified in the report.</p>	
 Michael Yu / Lab. Manager	
 程智科技股份有限公司 Compliance Certification Services Inc.	

9.2 Safety



SUPERIOR PRODUCT CONSULTING, INC.

3F, No. 10, Alley 6, Lane 235, Pao Chiao Rd., Hsien Tien, New Taipei City, Taiwan

TEL:02-29174137 FAX:02-29184517



CERTIFICATION OF CONFORMITY

According to the LVD Directive 2006/95/EC

Type of Product.....: LED Tube

Model Designation: TLNX1X200-X30X4X5

X1 can be 1 (1 Ft), 2 (2 Ft), 3 (3 Ft), 4 (4 Ft),
5 (for marketing purpose) for tube length.

X2 can be 07 (7W), 10 (10 W), 15 (15 W), 20
(20 W) for power consumption.

X3, X4, X5 can be 0-9 or A-Z or blank for
marketing purpose.

Manufacturer's Name.....: LanYang Optics Co. LTD

Manufacturer's Address: No.9, Ln. 15, Xiangcheng Rd., Dongshan
Township, Yilan County 269, Taiwan (R.O.C.)

Report Reference No.: SPCLVD 1304047

The above equipment was tested by Superior Product Consulting Inc., for compliance with the requirements set forth in the LVD Directive 2006/95/EC and the technical standards mentioned below. The results of testing in the report apply only to the product which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

IEC62560:2011, draft IEC62560 Annex C

EN61347-2-13: 2006, EN60598-1: 2008

EN62471-1: 2008; IEC62471: 2009 , EN61195:1999