



# X-ML19286LMxx-5050-12

Linear Series

www.**tlsteknoloji**.com

#### **PRODUCT PHOTO**



## **SPECIFICATIONS**

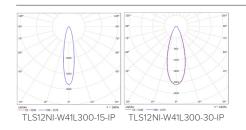
- · Default driving method is constant current input
- CCT Range from 2000°K up to 6500°K
- Luminous flux range from 1234 Im to 2122 Im
- Efficacy of the module up to 204 lm/W
- CRI 80 is standart, CRI 70 and CRI 90 are available
- Outstanding system color tolerance MacAdam 3 over the full operating area
- Simple installation (e.g. screw)
- Long life-time > 60,000 hours
- 5 years guarantee at specified conditions



# APPLICATIONS



## PHOTOMETRY



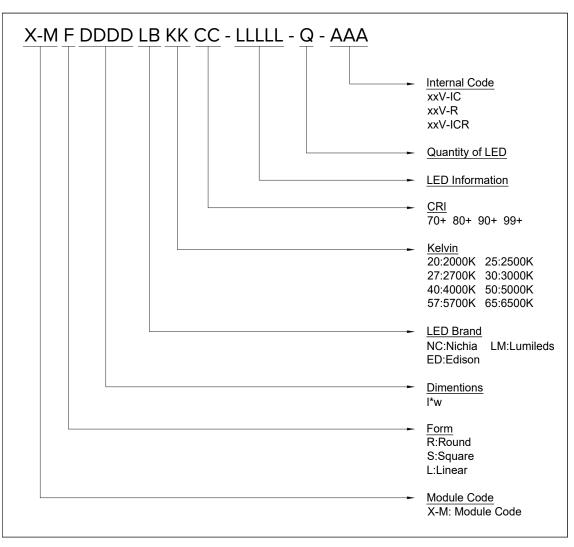
All Rights Reserved for TLS Technology Systems | Subject to Change with out Prior Notice. Akçaburgaz Mahallesi 3080. Sokak No:5 Esenyurt / İstanbul | www. tlsteknoloji.com | TEL: +90 444 27 33



## **TECHNICAL DATA**

Beam Angle	120°
Ambient temperature range	-25° ~ +55°C
Tc max	85°C
Max. DC forward current	350mA
Typical voltage of LED Module at max current	35V
Insulation test voltage	2kV
ESD classification	Class 1
Risk group (EN 62471:2008)	2
Type of protection	IP00

#### **ORDERING INFORMATIONS**



All Rights Reserved for TLS Technology Systems | Subject to Change with out Prior Notice. Akçaburgaz Mahallesi 3080. Sokak No:5 Esenyurt / İstanbul | www. tlsteknoloji.com | TEL: +90 444 27 33

### DRIVING CURRENT VS LUMEN OUTPUT SPECIFICATION

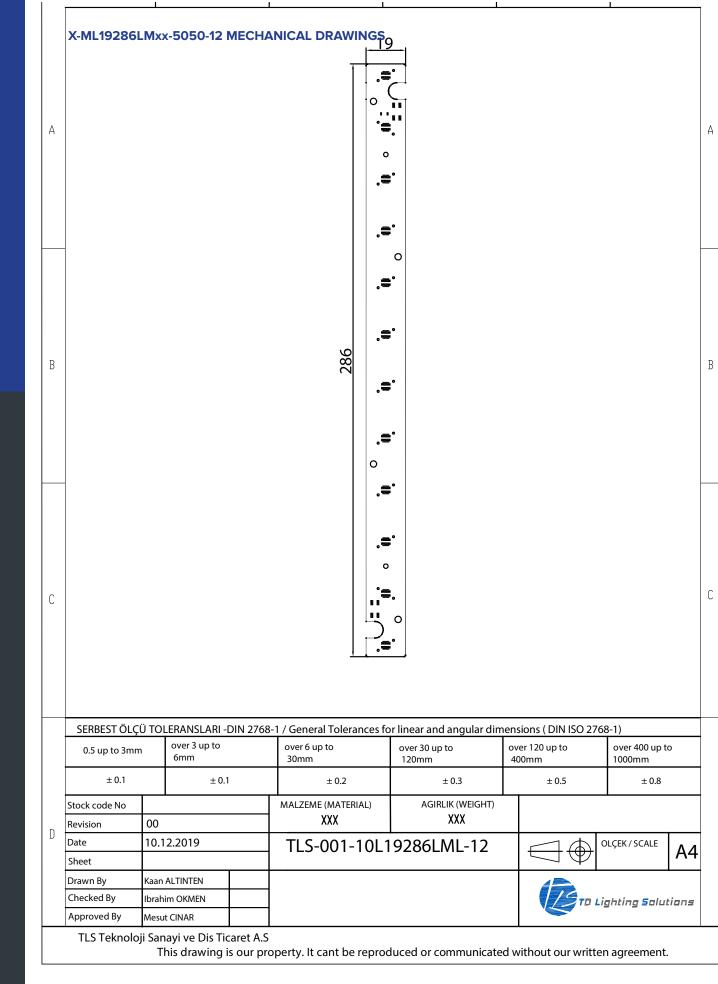
Module Code	X-ML19286LM	xx-5050-12			
PCB Material	ALU		Electrical Connection		
Operating Temperature (°C)	-40 ~ +	-85	Parallel	2	
Storage Temperature (°C)	-40 ~ +	-55	Series	6	
Thermal Conductivity (W/m-K)	1>		LED Quantity	12	
LED		5050 -	Round		
Correlated Color Temperature (CCT)		4000K			
Color Rendering Index (CRI)		80+			
Module Operating Voltage (V)	31,8	33,0	35,1		
Module Operating Current (mA)	200	250	350		
Branch Operating Current (mA)	100	125	175		
Module Power (W)	6,4	8,3	12,3		
Module Light Output (lm)	1.234	1.427	1.941		
Module Efficiency (lm/W)	194	173	158		
LED		5050	)-SQ		
Correlated Color Temperature (CCT)		4000K			
Color Rendering Index (CRI)		70+			
Module Operating Voltage (V)	32,6	33,6	34,4		
Module Operating Current (mA)	200	250	350		
Branch Operating Current (mA)	100	125	175		
Module Power (W)	6,5	8,4	12,1		
Module Light Output (lm)	1.329	1.579	2.121		
Module Efficiency (lm/W)	202	188	176		

The table below shows how to Module Light Output changes depending on CCT (°K)

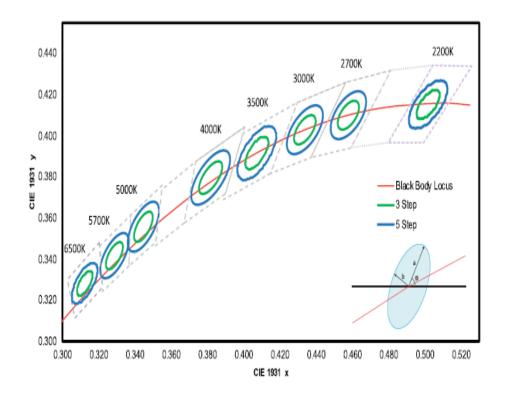
Lumen Output Multiplier								
LED	2700°K (CRI 80)	3000°K (CRI 80)	4000°K (CRI 80)	5000°K (CRI 80)	6500°K (CRI 80)			
5050 - SQ	0,875	0,916	1	1	1			
5050 - Round	0,83	0,88	0,92	0,92	0,92			

Relative luminous intensity versus CCT (°K)





#### **CCT AND BINNING INFORMATION**



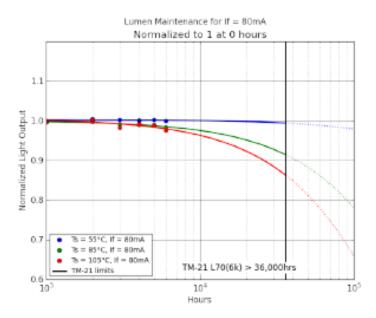


#### LIFE TIME

### MODEL NUMBER: NF2x757xR

#### Normalized Flux Statistics for I, = 80mA

		Ohrs	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs	alpha	8	L70
	median -	1.0000	1.0001	1.0046	0.9850	0.9932	0.9893	0.9775			
Ts-Tair-105°C	average -	1.0000	0.9992	1.0024	0.9828	0.9920	0.9881	0.9765	4.2281e-06	1.0049	85,509
	st dev =	0.0000	0.0039	0.0073	0.0071	0.0084	0.0102	0.0117	TM-21 L7	0(6k) > 38	5,000hrs
	min -	1.0000	0.9849	0.9751	0.9565	0.9721	0.9644	0.9490			
	max -	1.0000	1.0030	1.0099	0.9938	1.0090	1.0079	0.9927			
	median -	1.0000	0.9972	1.0011	0.9917	0.9892	0.9890	0.9831			
Ts-Tair-85°C	average -	1.0000	0.9959	0.9980	0.9909	0.9895	0.9901	0.9837	2.4796e-06	1.0000	143,84
	st dev =	0.0000	0.0072	0.0148	0.0168	0.0173	0.0175	0.0189	TM-21 L7	D(6k) > 38	5,000hrs
	min -	1.0000	0.9679	0.9529	0.9407	0.9375	0.9379	0.9297			
	max -	1.0000	1.0051	1.0167	1.0179	1.0151	1.0179	1.0124			
	median -	1.0000	1.0002	1.0061	1.0026	1.0020	1.0025	1.0005			
Ts-Tair-55°C	average -	1.0000	0.9998	1.0050	1.0031	1.0019	1.0019	1.0002	2.3852e-07	1.0028	1,507,2
	st dev =	0.0000	0.0023	0.0058	0.0091	0.0109	0.0111	0.0113	TM-21 L7	0(6k) > 38	5,000hrs
	min -	1.0000	0.9928	0.9853	0.9768	0.9713	0.9689	0.9667			
	max -	1.0000	1.0030	1.0139	1.0189	1.0206	1.0212	1.0209			



#### Delta u'v' for I,= 80mA

		Ohrs	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs
	median -	0.0000	0.0002	0.0007	0.0008	0.0009	0.0010	0.0012
Ts-Tair-105°C	average -	0.0000	0.0002	0.0007	0.0008	0.0009	0.0011	0.0012
	st dev =	0.0000	0.0001	0.0001	0.0001	0.0002	0.0001	0.0002
	min -	0.0000	0.0001	0.0005	0.0006	0.0007	0.0008	0.0007
	max -	0.0000	0.0004	0.0009	0.0010	0.0014	0.0015	0.0018
	median -	0.0000	0.0001	0.0005	0.0007	0.0010	0.0009	0.0010
Ts-Tai-85°C	average -	0.0000	0.0002	0.0006	0.0008	0.0011	0.0010	0.0011
	st dev =	0.0000	0.0002	0.0004	0.0004	0.0005	0.0004	0.0004
	min -	0.0000	0.0000	0.0001	0.0003	0.0004	0.0005	0.0006
	max -	0.0000	0.0009	0.0019	0.0022	0.0026	0.0024	0.0025
	median -	0.0000	0.0001	0.0004	0.0006	0.0009	0.0007	0.0009
Ts-Tair-55°C	average -	0.0000	0.0001	0.0005	0.0006	0.0009	0.0008	0.0009
	st dev =	0.0000	0.0001	0.0001	0.0002	0.0002	0.0002	0.0003
	min -	0.0000	0.0000	0.0003	0.0003	0.0006	0.0004	0.0006
	max -	0.0000	0.0003	0.0009	0.0013	0.0018	0.0016	0.0019

All Rights Reserved for TLS Technology Systems | Subject to Change with out Prior Notice. Akçaburgaz Mahallesi 3080. Sokak No:5 Esenyurt / İstanbul | www. tlsteknoloji.com | TEL: +90 444 27 33



#### **LEGAL NOTICE**

Product information provided by TLS Teknoloji Sistemleri San ve Dış Tic AŞ ("TLS") in this document is believed to be correct and accurate. TLS reserves the right to change/correct the specifications and other data or information relating to products without notice but TLS accepts no liability for errors that may appear in this document, howsoever occurring, or liability arising from the use or application of any information or data provided herein. Neither the supply of such information, nor the purchase or use of products conveys any licence or permission under patent, copyright, trademark or other intellectual property right of TLS or third parties.

Products sold by TLS are subject to its standard Terms and Conditions of Sale that are available on request. No warranty is given that products do not infringe the intellectual property rights of third parties, and furthermore, the use of products in certain ways or in combination with TLS, or non-TLS furnished equipments/components may infringe intellectual property rights of TLS.

The purpose of this document is to provide information only and it may not be used, applied or reproduced (in whole or in part) for any purpose nor be taken as a representation relating to the products in question. No warranty or guarantee express or implied is made concerning the capability, performance or suitability of any product, and information concerning possible applications or methods of use is provided for guidance only and not as a recommendation. The user is solely responsible for determining the performance and suitability of the product in any application and checking that any specification or data it seeks to rely on has not been superseded.

Products are intended for normal commercial applications. For applications requiring unusual environmental requirements, extended temperature range, or high reliability capability (e.g. military, or medical applications), special processing/testing/conditions of sale may be available on application to TLS.

CONTACT

#### TLS Teknoloji Sistemleri San ve Dış Tic AŞ

Akçaburgaz Mahallesi 3080. Sokak No:5 Esenyurt / İstanbul / TURKEY

info@tlsteknoloji.com +90 444 27 33

