

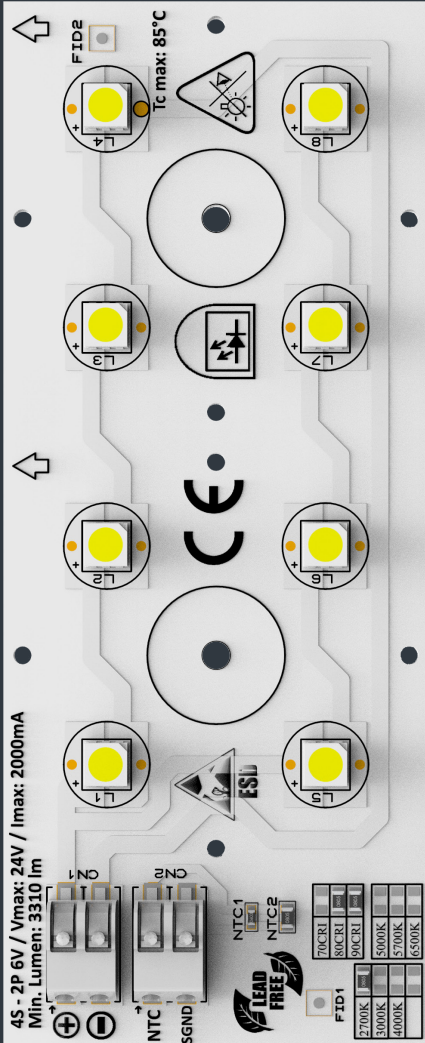


TD Lighting Solutions

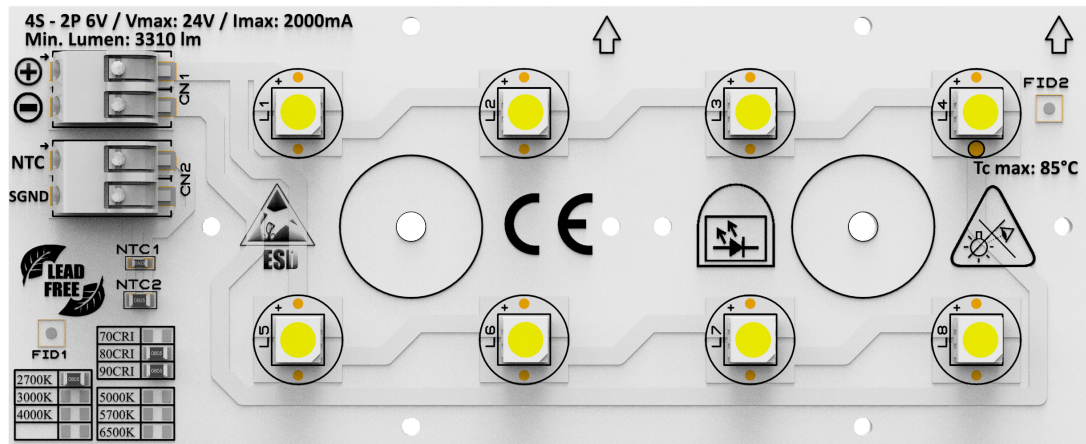
X-MS50122LM-27xx-5050-8

Square Series

www.tlsteknoloji.com



PRODUCT PHOTO



SPECIFICATIONS

- Default driving method is constant current input.
- CCT Range from 2000K up to 6500K
- Luminous flux range from 2.445 lm to 4.600 lm
- Efficacy of the module up to 156 lm/W
- CRI 80 is standard, 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

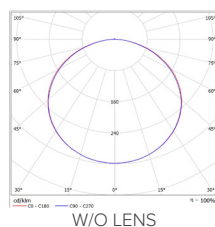


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APPLICATIONS

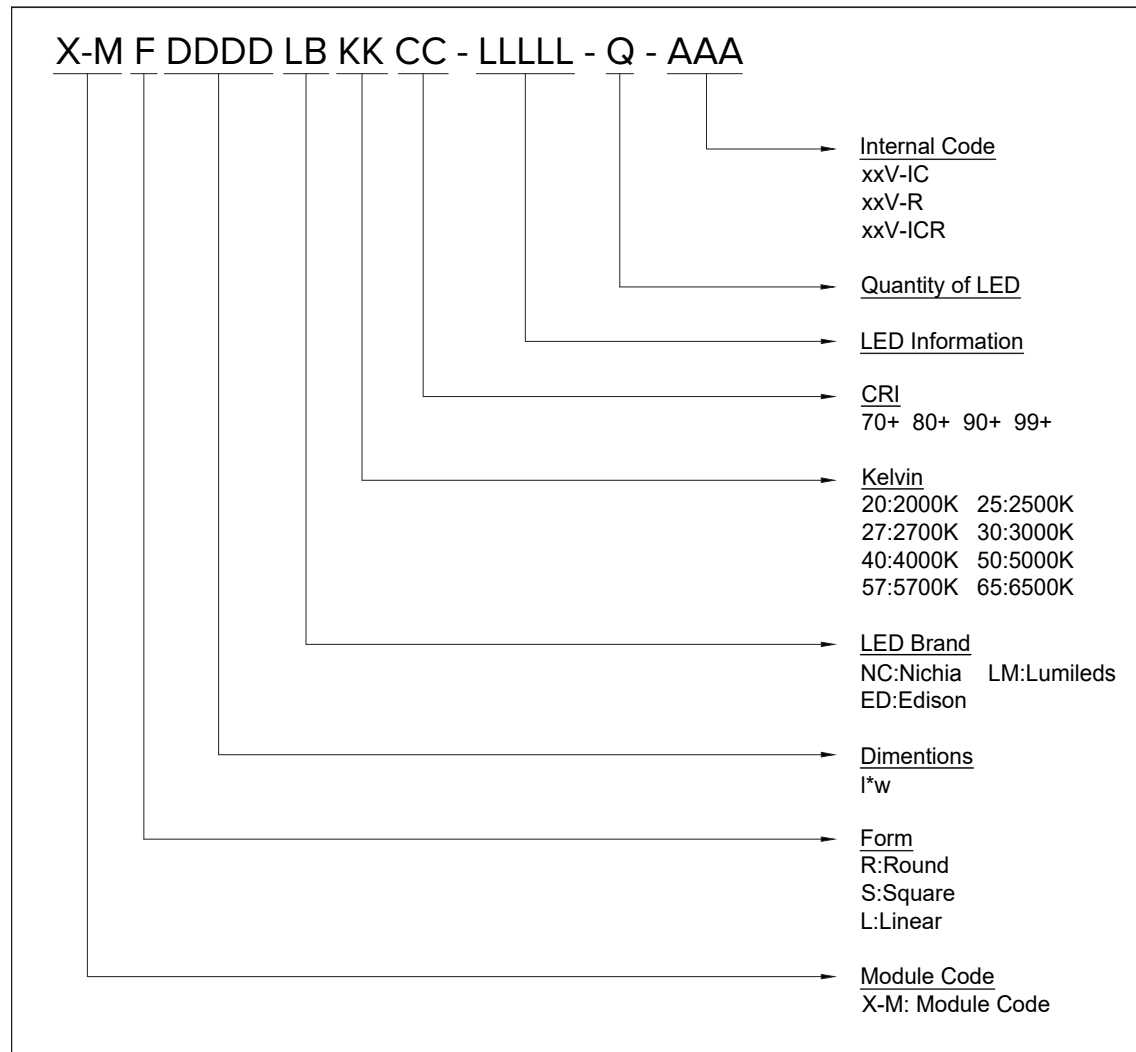
PHOTOMETRY



TECHNICAL DATA

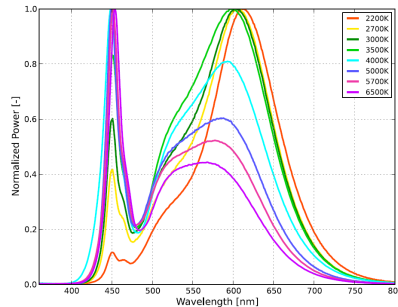
Beam Angle	120°
Ambient temperature range	-25° ~ +55°C
Tc max	85°C
Max. DC forward current	1400mA
Typical voltage of LED Module at max current	24V
Insulation test voltage	2kV
ESD classification	Class 1
Risk group (EN 62471:2008)	2
Type of protection	IP00

ORDERING INFORMATION



DRIVING CURRENT VS LUMEN OUTPUT SPECIFICATION

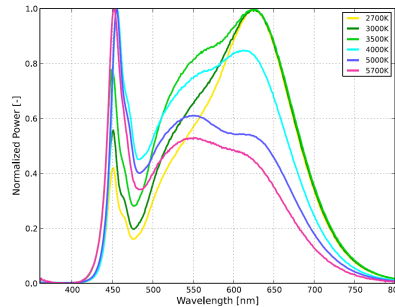
Common Characteristic [@Tj : 85°C] ;						
Module Code		X-MS50122LM-27xx-5050-8				
PCB Material		ALU		Electrical Connection		
Operating Temperature (°C)		-25 ~ +100°C		Parallel		2
Storage Temperature (°C)		-25 ~ +100°C		Series		4
Thermal Conductivity (W/m-K)		1,5		LED Quan		8
LED		LM-5050-Square				
Correlated Color Temperature (CCT)		2700K				
Color Rendering Index (CRI)		80+				
Module Operating Voltage (V)		23				24
Module Operating Current (mA)		800		1050		1400
Branch Operating Current (mA)		400		525		700
Module Power (W)		18,1		24,2		33,1
Module Light Output (lm)		2.825		3.587		4.600
Module Efficiency (lm/W)		156		148		139
LED		LM-5050-Square				
Correlated Color Temperature (CCT)		2700K				
Color Rendering Index (CRI)		90+				
Module Operating Voltage (V)		23				24
Module Operating Current (mA)		800		1050		1400
Branch Operating Current (mA)		400		525		700
Module Power (W)		18,1		24,2		33,1
Module Light Output (lm)		2.445		3.115		3.972
Module Efficiency (lm/W)		135		129		120
LED		LM-5050-Square				
Correlated Color Temperature (CCT)		2700K				
Module Operating Voltage (V)		23	23	23	23	24 24
Module Operating Current (mA)		800		1050		1400
Branch Operating Current (mA)		400	400	525	525	700 700
Module Power (W)		9,2	9,2	12,1	12,1	16,8 16,8
Module Light Output (lm)		1.435	1.242	1.787	1.558	2.335 2.016
Module Efficiency (lm/W)		156	135	148	129	139 120



Typical normalized power vs. wavelength for L150-xx8050xx000x0 at test current, $T_j=25^\circ\text{C}$

2700K 80CRI

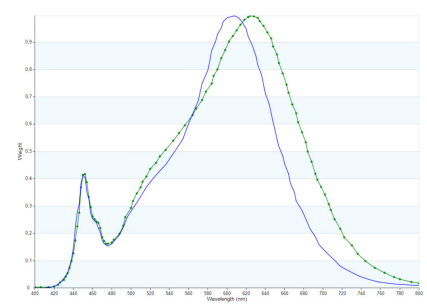
CRI=82
R9=4



Typical normalized power vs. wavelength for L150-xx9050xx000x0 at test current, $T_j=25^\circ\text{C}$

2700K 90CRI

CRI=93
R9=62



LUXEON 5050 6V 2700K 80CRI
LUXEON 5050 6V 2700K 90CRI

2700K 80CRI + 90CRI

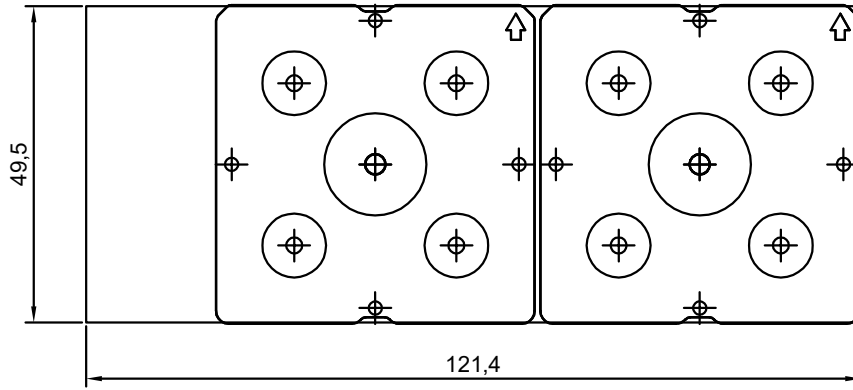
CRI=88
R9>20

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

Lumen Output Multiplier					
LED	2700K (CRI 80)	3000K (CRI 80)	4000K (CRI 80)	5000K (CRI 80)	6500K (CRI 80)
L-MIL150-27805006000S0	0,90	0,95	1,00	1,00	0,96
Lumen Output Multiplier					
LED	2700K (CRI 90)	3000K (CRI 90)	4000K (CRI 90)	5000K (CRI 90)	6500K (CRI 90)
L-MIL150-27905006000S0	0,91	0,96	1,00	1,01	X

Relative luminous intensity versus CCT (°K)

X-MS50122LM-27xx-5050-8 MECHANICAL DRAWINGS



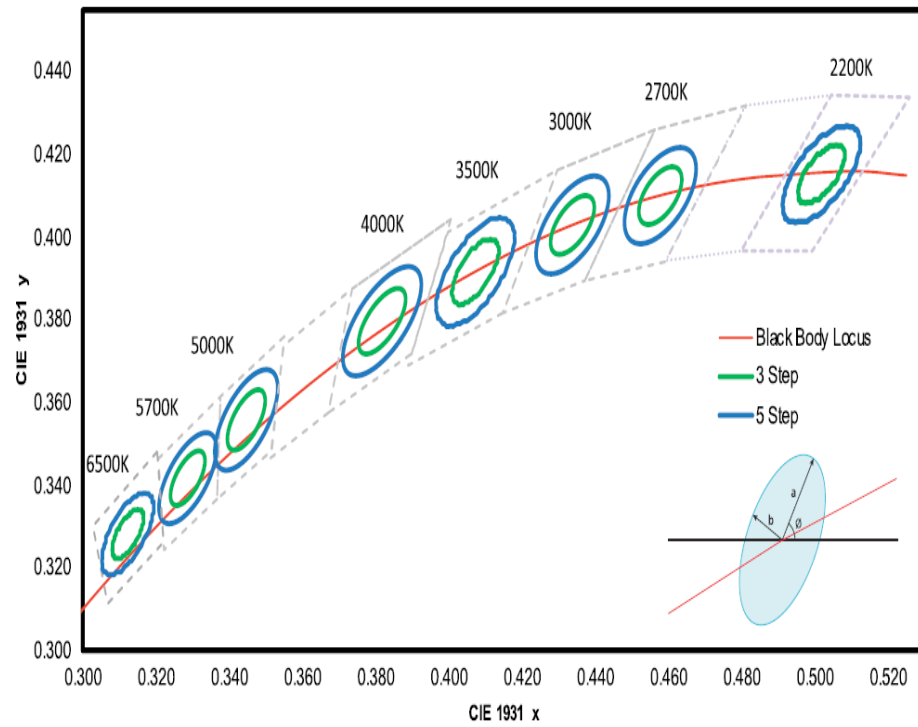
SERBEST ÖLÇÜ TOLERANSLARI -DIN 2768-1 / General Tolerances for linear and angular dimensions (DIN ISO 2768-1)

0.5 up to 3mm	over 3 up to 6mm	over 6 up to 30mm	over 30 up to 120mm	over 120 up to 400mm	over 400 up to 1000mm
± 0.1	± 0.1	± 0.2	± 0.3	± 0.5	± 0.8
Stock code No	MALZEME (MATERIAL)		AGIRLIK (WEIGHT)		
Revision	--		--		
Date	11.01.2022		TLS-001-10S50122LML50-8-V2-T1.6		
Sheet					
Drawn By	Kaan ALTINTEN				
Checked By	Kaan ALTINTEN				
Approved By	Utku ÖZTÜRK				

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CCT AND BINNING INFORMATION

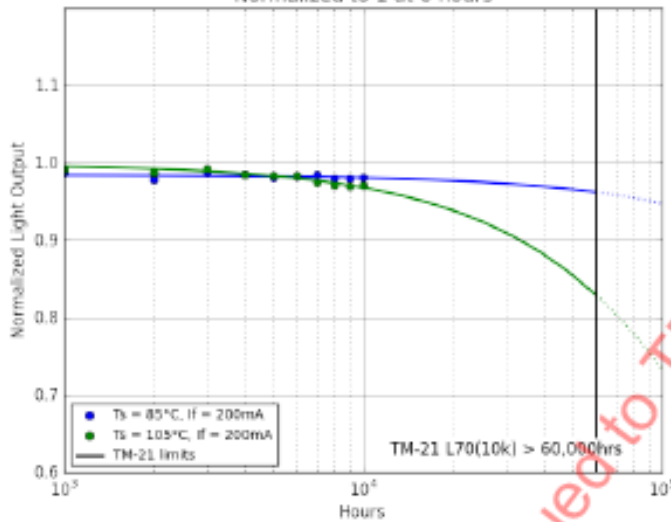


LIFE TIME

MODEL NUMBER: 5050 Square

Normalized Flux Statistics for $I_f = 200\text{mA}$

	0hrs	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs	7000hrs	8000hrs	9000hrs	10000hrs	alpha	B	L70
median =	1.0000	0.9907	0.9887	0.9931	0.9848	0.9845	0.9851	0.9776	0.9735	0.9701	0.9733			
$T_s=T_{air}=105^\circ\text{C}$ average =	1.0000	0.9910	0.9880	0.9928	0.9844	0.9832	0.9834	0.9756	0.9710	0.9697	0.9711	3.0971e-06	0.9986	114,705
st dev =	0.0000	0.0067	0.0057	0.0063	0.0055	0.0059	0.0067	0.0065	0.0065	0.0078	0.0067			TM-21 L70(10k) > 60,000hrs
min =	1.0000	0.9703	0.9694	0.9731	0.9705	0.9644	0.9674	0.9575	0.9563	0.9479	0.9528			
max =	1.0000	1.0023	0.9989	1.0026	0.9910	0.9902	0.9921	0.9838	0.9800	0.9804	0.9787			
median =	1.0000	0.9883	0.9780	0.9885	0.9857	0.9823	0.9822	0.9849	0.9809	0.9806	0.9815			
$T_s=T_{air}=85^\circ\text{C}$ average =	1.0000	0.9879	0.9787	0.9880	0.9850	0.9817	0.9827	0.9846	0.9801	0.9800	0.9816	3.8436e-07	0.9846	887,624
st dev =	0.0000	0.0049	0.0040	0.0048	0.0056	0.0052	0.0048	0.0053	0.0053	0.0055	0.0055			TM-21 L70(10k) > 60,000hrs
min =	1.0000	0.9779	0.9721	0.9812	0.9751	0.9732	0.9728	0.9728	0.9699	0.9695	0.9707			
max =	1.0000	0.9977	0.9888	0.9995	0.9967	0.9920	0.9912	0.9922	0.9899	0.9892	0.9901			

Lumen Maintenance for $I_f = 200\text{mA}$
Normalized to 1 at 0 hoursDelta u'v' for $I_f = 200\text{mA}$

	0hrs	1000hrs	2000hrs	3000hrs	4000hrs	5000hrs	6000hrs	7000hrs	8000hrs	9000hrs	10000hrs
median =	0.0000	0.0012	0.0014	0.0012	0.0015	0.0015	0.0018	0.0019	0.0019	0.0021	0.0021
$T_s=T_{air}=105^\circ\text{C}$ average =	0.0000	0.0012	0.0014	0.0012	0.0015	0.0015	0.0018	0.0019	0.0019	0.0021	0.0022
st dev =	0.0000	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0003	0.0003	0.0003
min =	0.0000	0.0009	0.0011	0.0009	0.0011	0.0012	0.0014	0.0015	0.0011	0.0014	0.0016
max =	0.0000	0.0015	0.0017	0.0016	0.0018	0.0018	0.0022	0.0022	0.0023	0.0025	0.0028
median =	0.0000	0.0013	0.0018	0.0017	0.0019	0.0020	0.0022	0.0022	0.0022	0.0024	0.0024
$T_s=T_{air}=85^\circ\text{C}$ average =	0.0000	0.0013	0.0017	0.0017	0.0019	0.0020	0.0022	0.0022	0.0022	0.0024	0.0024
st dev =	0.0000	0.0001	0.0002	0.0002	0.0003	0.0003	0.0002	0.0003	0.0002	0.0002	0.0003
min =	0.0000	0.0011	0.0012	0.0014	0.0014	0.0015	0.0018	0.0017	0.0018	0.0020	0.0021
max =	0.0000	0.0015	0.0021	0.0021	0.0022	0.0026	0.0026	0.0027	0.0027	0.0028	0.0030

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