



TD Lighting Solutions

X-MR0020NC-xx-NVSx219C-1

Round Series



www.tlstechnoloji.com

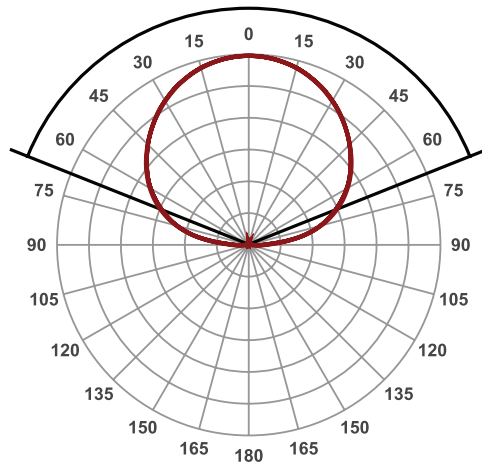
Revision: **September / 2016**

SPECIFICATIONS



PHOTOMETRY

Beam angle **130°** (2 C-PLANES)



FEATURES

ORDER CODE X-MR0020NC-xx-NVSx219C-1

Default driving method is constant current input.
Ask for alternatives depending on your project.

IES and LDT Files Provided Upon Request



For your orders please call us:

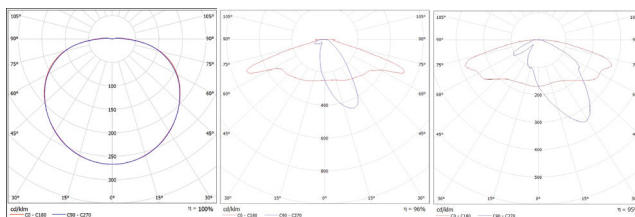
+90 444 27 33

APPLICATIONS



Street Lighting	Outdoor Area Lighting	High Bay Lighting	Indoor Lighting	Office Lighting
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PHOTOMETRY



W/O LENS

STRADELLA T2

STRADELLA T3

Top view of the TLS-001-10R20NC-1 LED module. The module is circular with a diameter of 20.00 mm. It features a central square pad, a central circular pad, and a central rectangular pad. The rectangular pad is labeled "LED" and "NICHIA". The square pad is labeled "TLS-001-10R20NC-1". The circular pad is labeled "Lens". The module also includes a "No Pb" symbol and a "No Pb" symbol.

_Lens Positioning Pin Holes
4xØ2.00

SPEEDEST BLUETOOTH TRANSLAPART - DIN 2768-1 / General Tolerances for linear and angular dimensions (DIN ISO 2768-1)											
0.5 up to 3mm	± 0.1	over 3 up to 6mm	± 0.1	over 6 up to 30mm	± 0.2	over 30 up to 120mm	± 0.3	over 120 up to 400mm	± 0.5	over 400 up to 1000mm	± 0.8

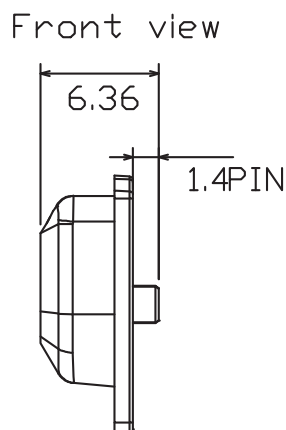
Stock code No : 27363		MALZEME (MATERIAL)		AGIRLIK (WEIGHT)	
Revision : 00		PC			
Date: 19.08.2016		PARÇA NO (PART NO)		TLS-001-10R20NC-1	
Sheet : 1					
Drawn By	M. KAZAKLI				
Checked By	D. SAWATSEVER				
Approved By	M. CINAR				
					TE Lighting Solutions
					A4

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LED position



Please make sure beam angle is in the right direction
Please make sure lens positioning pin points are face to face.

SERBEST ALÇU TOLERANSLARI - DIN 2768-1 / General Tolerances for linear and angular dimensions (DIN ISO 2768-1)											
0.5 up to 3mm	± 0.1	over 3 up to 6mm	± 0.1	over 6 up to 30mm	± 0.2	over 30 up to 120mm	± 0.3	over 120 up to 400mm	± 0.5	over 400 up to 1000mm	± 0.8

Stock code No : 00		MALZEME (MATERIAL)		AGIRLIK (WEIGHT)	
Revision : 00		PC			
Date: 4.10.2016		PARÇA NO (PART NO)		Stradella T2	
Sheet: 1				A4	
Drawn By M. KAZAKLI					
Checked By D. SAKATSEVER					
Approved By M. CINAR					
		 YTD Lighting solutions			

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Please make sure beam angle is in the right direction
Please make sure lens positioning pin points are face to face.

SERBEST BİÇİM TOLERANSLARI - DIN 2768-1 / General Tolerances for linear and angular dimensions (DIN ISO 2768-1)											
0.5 up to 3mm	± 0.1	over 3 up to 6mm	± 0.1	over 6 up to 30mm	± 0.2	over 30 up to 120mm	± 0.3	over 120 up to 400mm	± 0.5	over 400 up to 1000mm	± 0.8
Stack code No : 00				MALZEME (MATERIAL)				AĞIRLIK (WEIGHT)			
Revision : 00				PC							
Date : 4.10.2016				PARÇA NO (PART NO)				Stradella T3			
Sheet : 1											
Drawn By		M. KAZAKLI									
Checked By		A. SANATSEVER									
Approved By		M. CINAR									
										A4	
										TO Lighting solutions	

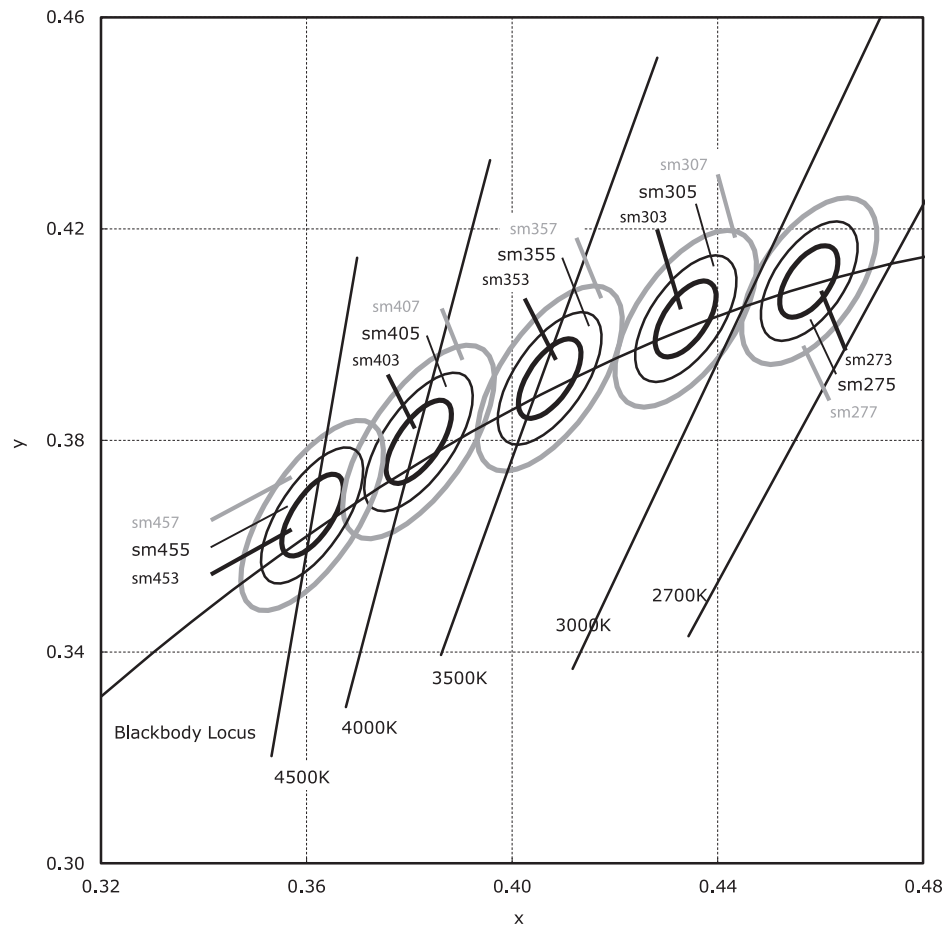
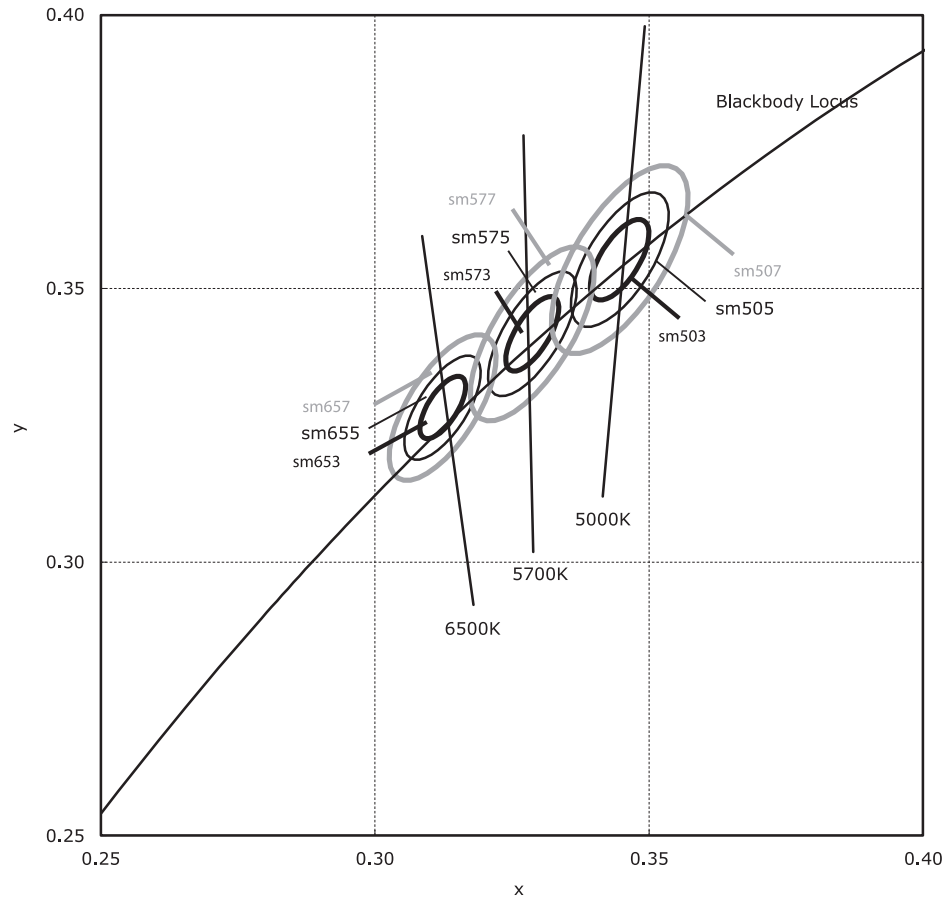
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DRIVING CURRENT VS LUMEN OUTPUT SPECIFICATION TABLE

Detailed specification table for 1 parallels and 1 series of X-MR0020NC-xx-NVSx219C-1

Common Characteristic [@Tj : 25°C & Ts 25] ;						
LED Brand & Type	X-MR0020NC-xx-NVSx219C-1			Electrical Connection		
PCB Material	Aluminium					
Operating Temperature (°C)	-40 ~ 100			Parallel	1	
Storage Temperature (°C)	-40 ~ 100			Series	1	
Thermal Conductivity (W/m-K)	1.5			Total LED Quantity	1	
	Specs for Warm White Outputs					
Part Number	X-MR0020NC-xx-NVSx219C-1VWW			X-MR0020NC-xx-NVSx219C-1WW		
Correlated Color Temperature (CCT)	2700 K			3000 K		
Color Rendering Index (CRI)	80 +			80 +		
Module Operating Current (mA)	500	700	1050	500	700	1050
Branch Operating Current (mA)	500	700	1050	500	700	1050
Module Operating Voltage (V)	2,90	2,98	3,10	2,90	2,98	3,10
Module Power (W)	1,45	2,08	3,25	1,45	2,08	3,25
Module Light Output (lm)	189,0	254,0	356,3	199,4	268,0	375,9
Module Efficiency (lm/W)	130,0	122,0	110,0	137,0	128,0	116,0
	Specs for Neutral White Outputs					
Part Number	X-MR0020NC-xx-NVSx219C-1NW					
Correlated Color Temperature (CCT)	4000 K					
Color Rendering Index (CRI)	80 +					
Module Operating Current (mA)	500		700		1050	
Branch Operating Current (mA)	500		700		1050	
Module Operating Voltage (V)	2,9		2,98		3,1	
Module Power (W)	1,45		2,08		3,25	
Module Light Output (lm)	209		282		395,6	
Module Efficiency (lm/W)	144		135		122	
	Specs for Cool White Outputs					
Part Number	X-MR0020NC-xx-NVSx219C-1CW			X-MR0020NC-xx-NVSx219C-1VCW		
Correlated Color Temperature (CCT)	5000 K			6500 K		
Color Rendering Index (CRI)	70 +			70 +		
Module Operating Current (mA)	500	700	1050	500	700	1050
Branch Operating Current (mA)	500	700	1050	500	700	1050
Module Operating Voltage (V)	2,9	2,98	3,1	2,9	2,98	3,1
Module Power (W)	1,45	2,08	3,25	1,45	2,08	3,25
Module Light Output (lm)	239	322	453,4	228	308	433,7
Module Efficiency (lm/W)	165	154	140	157	148	133

CCT AND BINNING INFORMATION



LIFETIME PROJECTION & WORST CONDITION PERFORMANCE

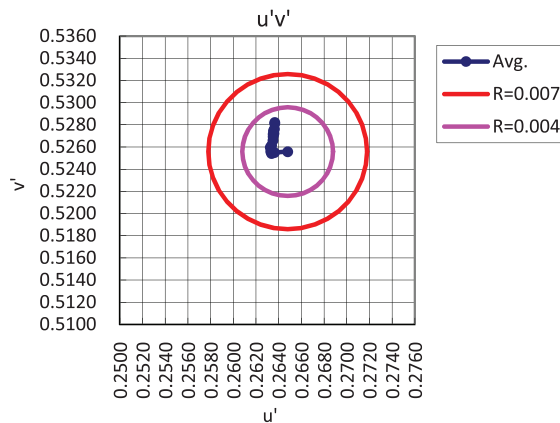
MODEL NUMBER: NVSL219C

Data Set	Case Temperature [T _s]	Ambient Temperature [T _A]	Drive Current [I _F]	Lumen Maintenance at 10,000 hours	Chromaticity Shift (Δu'v') at 10,000 hours	TM-21 Projection L ₇₀ (10K)
1	55 °C	> 50 °C	700 mA	99.8 %	0.0016	> 60000 hours
2	55 °C	> 50 °C	1500 mA	99.1 %	0.0019	> 60000 hours
3	85 °C	> 80 °C	700 mA	99.4 %	0.0019	> 60000 hours
4	85 °C	> 80 °C	1200 mA	97.0 %	0.0018	> 60000 hours
5	85 °C	> 80 °C	1500 mA	99.4 %	0.0021	> 60000 hours
6	120 °C	> 115 °C	700 mA	94.4 %	0.0018	> 60000 hours
7	120 °C	> 115 °C	1200 mA	94.5 %	0.0029	> 60000 hours

Data Set 7 : 120 °C, 1200 mA

Actual Case Temperature [T _s]	121.1 °C
Actual Ambient Temperature [T _A]	117.7 °C
Drive Current [I _F]	1200 mA
Measurement Current	1200 mA

NOTES:

T_s and T_A were measured during initial setup.

Test duration used	5000 h	to	10000 h
B	0.9777		
α	3.4618E-06		
R ²	0.9182		
Calculated L ₇₀ (10K)	96500	hours	
Reported L ₇₀ (10K)	> 60000	hours	

Curve-fit equation:

$$\Phi(t) = B \exp(-\alpha t)$$

Lumen maintenance life equation:

$$L_{70} = \ln(B/0.7)/\alpha$$

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