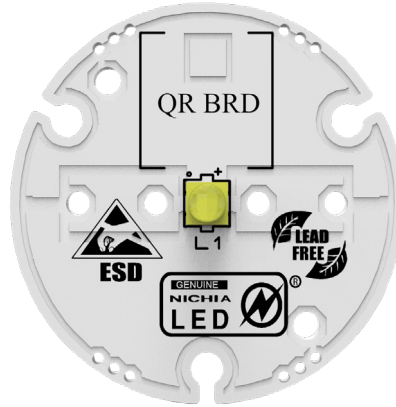


PRODUCT PHOTO



SPECIFICATIONS

- Default driving method is constant current input
- CCT Range from 2700K up to 6500K
- This module can be used as 1 series.
- Luminous flux range from 156 lm to 591 lm
- Efficacy of the module up to 180 lm/W
- CRI 80 is standard. CRI 70 and CRI 90 is 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



For your orders please call us:

+90 444 27 33

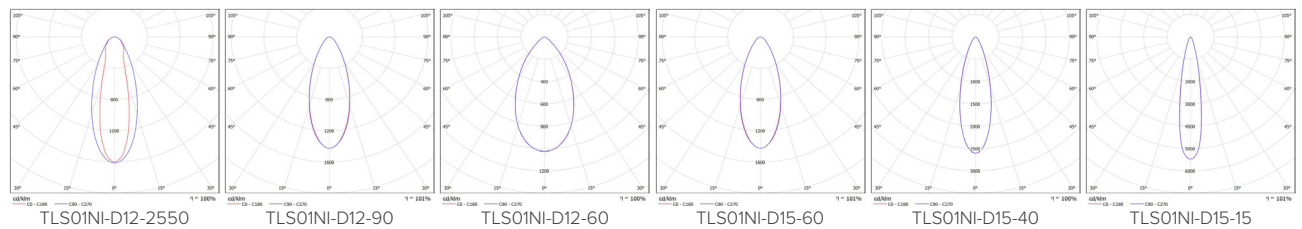
APPLICATIONS



Spotlight

Flood Lighting

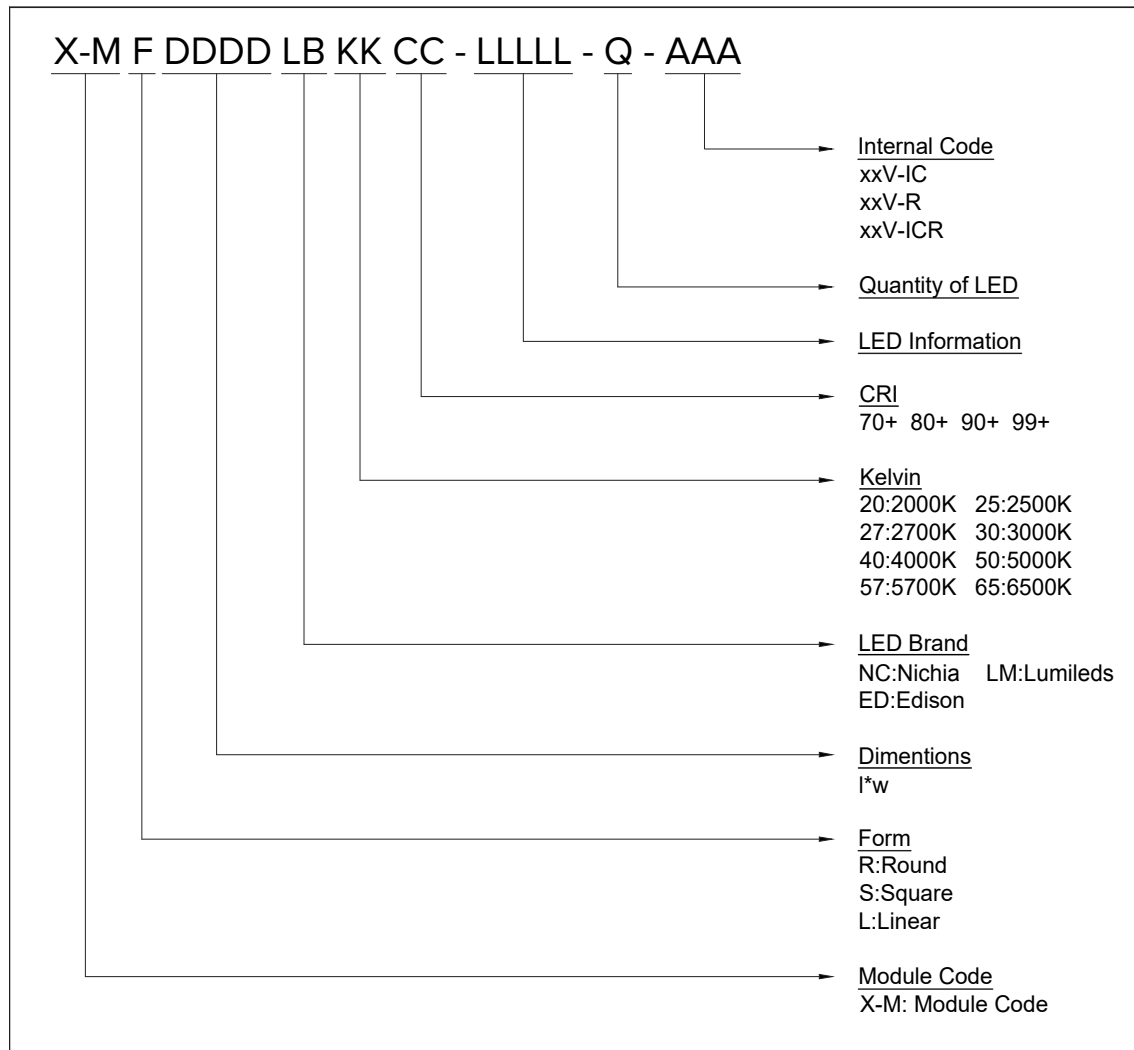
PHOTOMETRY



TECHNICAL DATA

| | |
|--|--------------|
| Beam Angle | 120° |
| Ambient temperature range | -25° ~ +55°C |
| Tc max | 100°C |
| Max. DC forward current | 1400mA |
| Typical voltage of LED Module at max current | 3,1V |
| Insulation test voltage | 2kV |
| ESD classification | Class 1 |
| Risk group (EN 62471:2008) | 2 |
| Type of protection | IPO0 |

ORDERING INFORMATION



DRIVING CURRENT VS LUMEN OUTPUT SPECIFICATION

| Common Characteristic [@Tj : 85°C] ; | | | |
|--------------------------------------|-------------------------|-----------------------|------|
| Module Code | X-MR0032NCxx-NVSW319B-1 | | |
| PCB Material | ALU | Electrical Connection | |
| Operating Temperature (°C) | -40 ~ +100 | Parallel | 1 |
| Storage Temperature (°C) | -40 ~ +55 | Series | 1 |
| Thermal Conductivity (W/m-K) | 1> | LED Quantity | 1 |
| LED NVSW319B_R8000 | | | |
| Correlated Color Temperature (CCT) | 4000K | | |
| Color Rendering Index (CRI) | 80+ | | |
| Module Operating Voltage (V) | 2,72 | 2,84 | 2,99 |
| Module Operating Current (mA) | 350 | 700 | 1400 |
| Branch Operating Current (mA) | 350 | 700 | 1400 |
| Module Power (W) | 0,95 | 1,99 | 4,19 |
| Module Light Output (lm) | 157 | 300 | 553 |
| Module Efficiency (lm/W) | 165 | 151 | 132 |
| LED NVSW219F-V1_R8000 | | | |
| Correlated Color Temperature (CCT) | 4000K | | |
| Color Rendering Index (CRI) | 80+ | | |
| Module Operating Voltage (V) | 2,79 | 2,9 | 3,06 |
| Module Operating Current (mA) | 350 | 700 | 1400 |
| Branch Operating Current (mA) | 350 | 700 | 1400 |
| Module Power (W) | 0,98 | 2,03 | 4,28 |
| Module Light Output (lm) | 156 | 296 | 540 |
| Module Efficiency (lm/W) | 160 | 146 | 126 |
| LED NVSW219F_R70 | | | |
| Correlated Color Temperature (CCT) | 4000K | | |
| Color Rendering Index (CRI) | 70+ | | |
| Module Operating Voltage (V) | 2,79 | 2,9 | 3,06 |
| Module Operating Current (mA) | 350 | 700 | 1400 |
| Branch Operating Current (mA) | 350 | 700 | 1400 |
| Module Power (W) | 0,98 | 2,03 | 4,28 |
| Module Light Output (lm) | 176 | 329 | 591 |
| Module Efficiency (lm/W) | 180 | 162 | 138 |

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

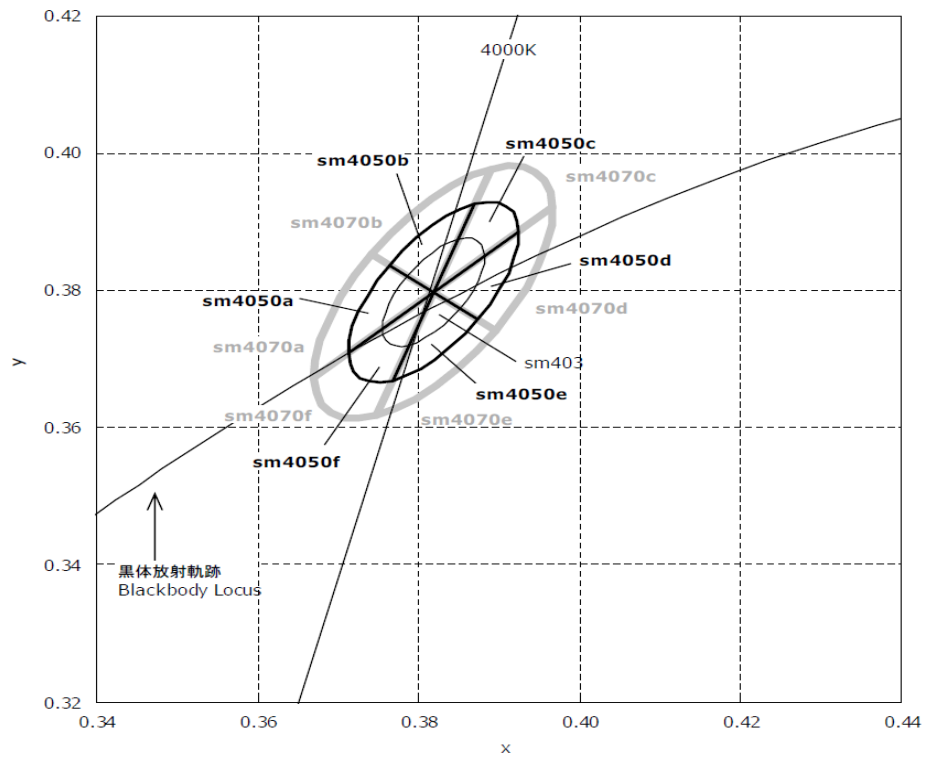
| Lumen Output Multiplier | | | | | |
|-------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| LED | 2700°K (CRI 80) | 3000°K (CRI 80) | 4000°K (CRI 80) | 5000°K (CRI 80) | 6500°K (CRI 80) |
| NVSW319B_R8000 | 0,92 | 0,94 | 1,00 | 1,01 | 0,98 |
| NVSW219F-V1_R8000 | 0,88 | 0,92 | 0,96 | 0,97 | 0,94 |

| Lumen Output Multiplier | | | | | |
|-------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| LED | 2700°K (CRI 70) | 3000°K (CRI 70) | 4000°K (CRI 70) | 5000°K (CRI 70) | 6500°K (CRI 70) |
| NVSW219F_R70 | 0,93 | 0,95 | 1,00 | 1,01 | X |

Relative luminous intensity versus CCT (°K)

| 1 | 2 | 3 | 4 | 5 | 6 | |
|--|---------------|------------------|----------------------|---------------------|----------------------|-----------------------|
| X-MR0032NCxx-NVSW319B-1 MECHANICAL DRAWINGS | | | | | | |
| A | | | | | A | |
| B | | | | | B | |
| C | | | | | C | |
| 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 | 00 | | XXX | XXX | | |
| Date | 10.12.2019 | | TLS-001-10R0032NC-*1 | | | OLÇEK / SCALE |
| Sheet | | | | | | |
| Drawn By | Kaan ALTINTEN | | | | | |
| Checked By | Ibrahim OKMEN | | | | | |
| Approved By | Mesut CINAR | | | | | |
| A4 | | | | | | |
| TLS Teknoloji Sanayi ve Dis Ticaret A.S This drawing is our property. It cant be reproduced or communicated without our written agreement. | | | | | | |

CCT AND BINNING INFORMATION



LIFE TIME

MODEL NUMBER: NVSW319B

Test Summary:

| Data Set | Case Temperature [°C] | Ambient Temperature [°C] | Drive Current [mA] | Lumen maintenance at 10K hours [%] | Chromaticity Shift ($\Delta u'v'$) at 10K hours | TM-21 Projection L ₇₀ (10K) [hours] | TM-21 Projection L ₈₀ (10K) [hours] | TM-21 Projection L ₉₀ (10K) [hours] |
|----------|-----------------------|--------------------------|--------------------|------------------------------------|---|--|--|--|
| 1 | 55 | > 50 | 700 | 99.8 | 0.0016 | > 60000 | > 60000 | > 60000 |
| 2 | 55 | > 50 | 1500 | 99.1 | 0.0019 | > 60000 | > 60000 | > 60000 |
| 3 | 85 | > 80 | 700 | 99.4 | 0.0019 | > 60000 | > 60000 | > 60000 |
| 4 | 85 | > 80 | 1200 | 97.0 | 0.0018 | > 60000 | > 60000 | 38400 |
| 5 | 85 | > 80 | 1500 | 99.4 | 0.0021 | > 60000 | > 60000 | > 60000 |
| 6 | 105 | > 100 | 700 | 94.4 | 0.0014 | > 60000 | 47900 | 20600 |
| 7 | 105 | > 100 | 1200 | 91.8 | 0.0017 | 54100 | 32200 | 13000 |
| 8 | 105 | > 100 | 1500 | 90.1 | 0.0022 | 46500 | 27100 | 9880 |
| 9 | 120 | > 115 | 700 | 94.4 | 0.0018 | > 60000 | > 60000 | 25200 |
| 10 | 120 | > 115 | 1200 | 94.5 | 0.0029 | > 60000 | 57900 | 23900 |
| 11 | 120 | > 115 | 1500 | 89.1 | 0.0037 | 49100 | 27300 | 8180 |
| | | | | | | | | |

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@tsteknoloji.com
+90 444 27 33