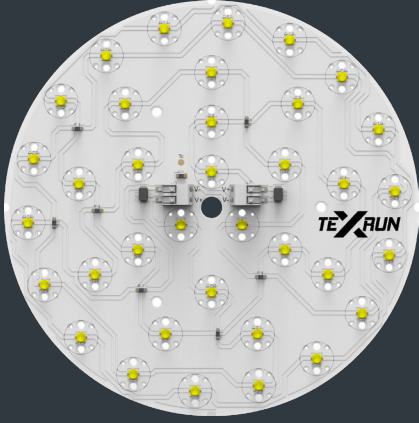




TD Lighting Solutions

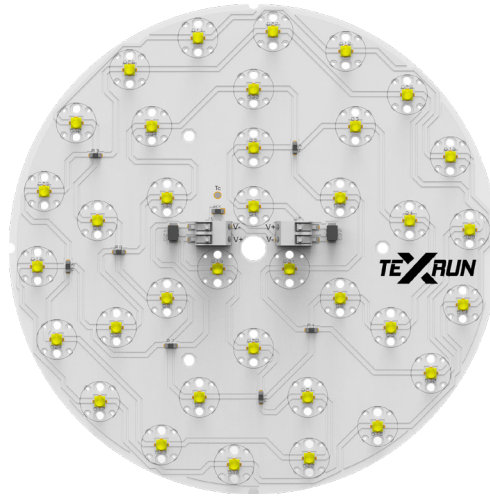


X-MR00160NC4070-NVSW219F-36

Round Series

www.tlsteknoloji.com

PRODUCT PHOTO



SPECIFICATIONS

- Default driving method is constant current input.
- CCT Range from 1800K up to 6500K
- Luminous flux range from 11268 lm to 18029 lm
- Efficiency of the module up to 157 lm/W
- CRI 70 is standard, CRI 80 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

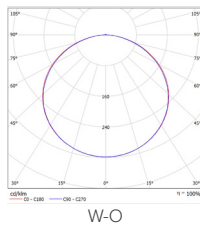


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APPLICATIONS

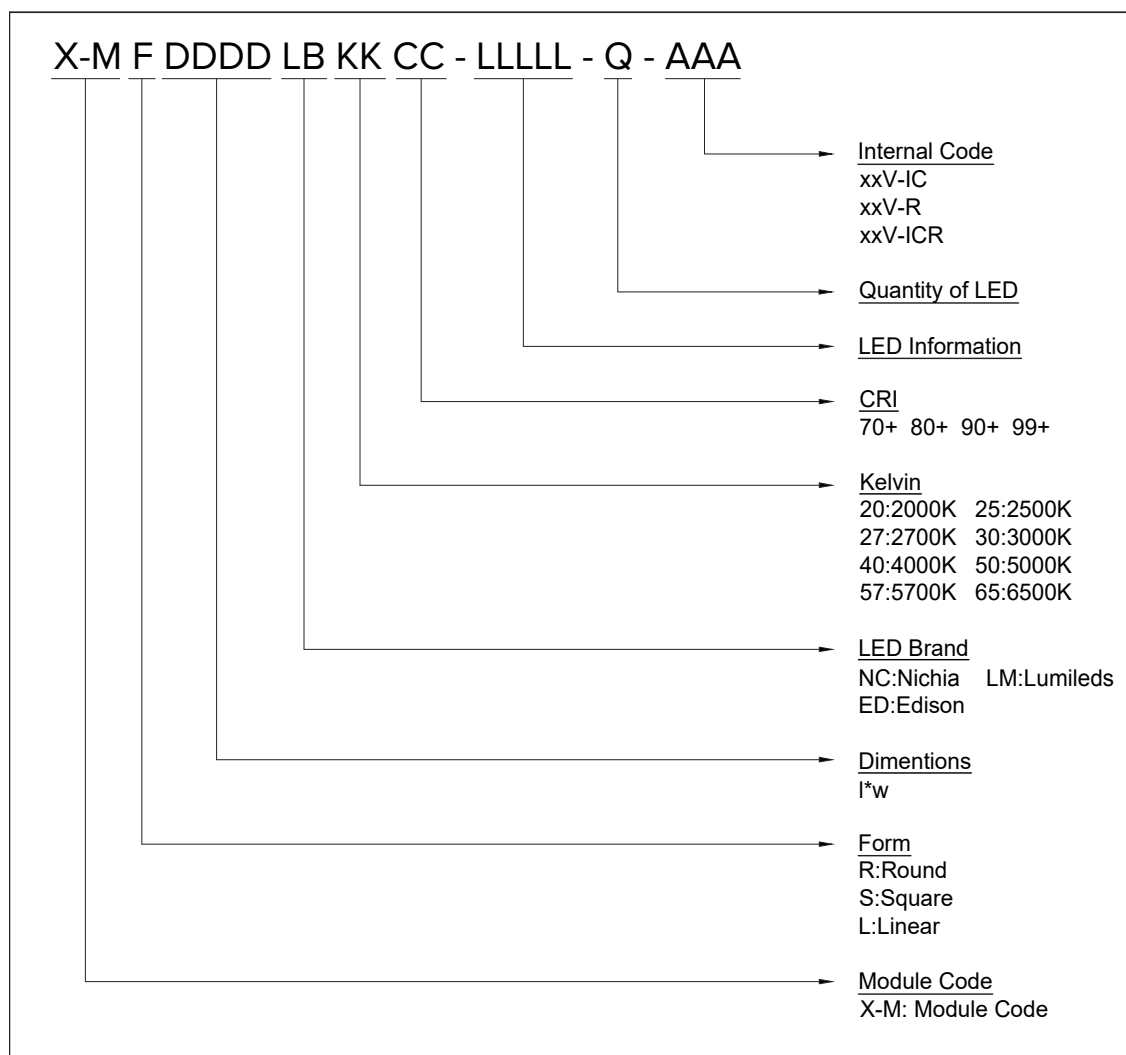
PHOTOMETRY



TECHNICAL DATA

Beam Angle	120°
Ambient temperature range	-25° ~ +55°C
Tc max	85°C
Max. DC forward current	1200mA
Typical voltage of LED Module at max current	113V
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-MR00160NC4070-NVSW219F-36		
PCB Material	ALU	Electrical Connection	
Operating Temperature (°C)	-40 ~ +105	Parallel	1
Storage Temperature (°C)	-40 ~ +105	Series	36
Thermal Conductivity (W/m-K)	1,5	LED Quantity	36
LED	NVSW219		
Correlated Color Temperature (CCT)	4000K		
Color Rendering Index (CRI)	70+		
Module Operating Voltage (V)	103	106	107
Module Operating Current (mA)	700	1050	1200
Branch Operating Current (mA)	700	1050	1200
Module Power (W)	72	111	128
Module Light Output (lm)	11297	15998	17885
Module Efficiency (lm/W)	157	144	139
LED	Z5-M3		
Correlated Color Temperature (CCT)	4000K		
Color Rendering Index (CRI)	70+		
Module Operating Voltage (V)	107	111	113
Module Operating Current (mA)	700	1050	1200
Branch Operating Current (mA)	700	1050	1200
Module Power (W)	75	116	135
Module Light Output (lm)	11268	16451	18029
Module Efficiency (lm/W)	151	142	134

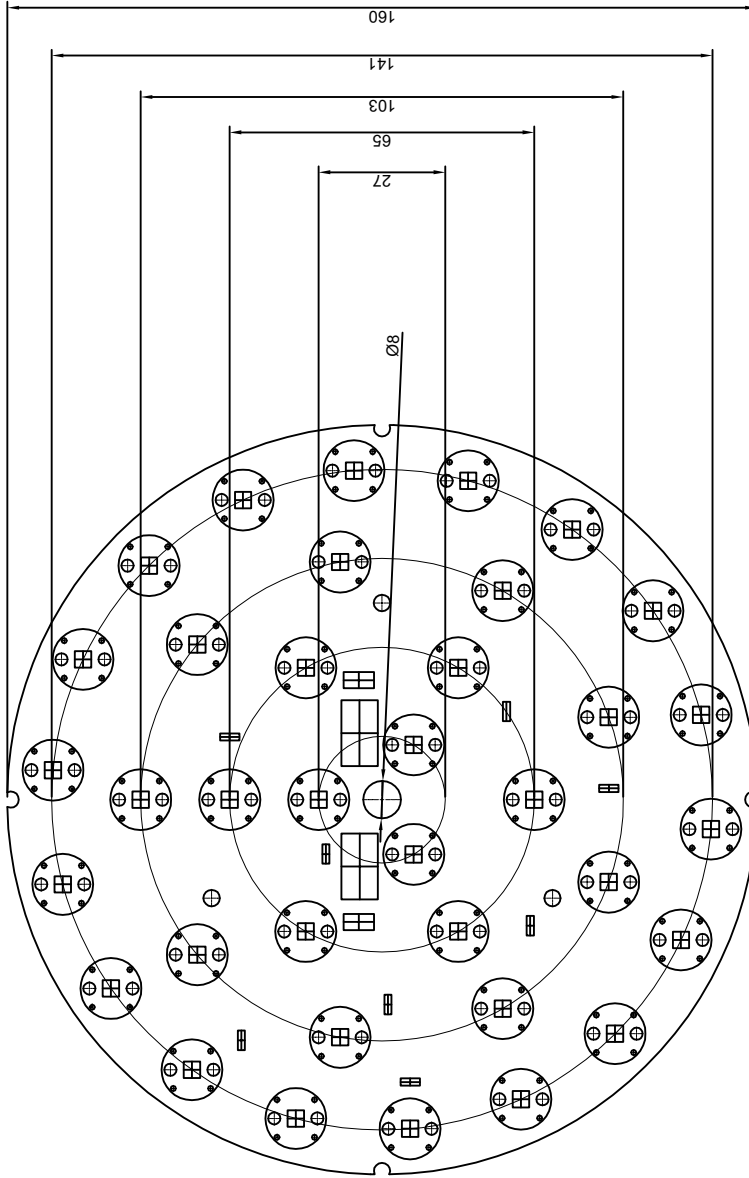
Common Characteristic [@Tj : 85°C] ;			
Module Code	X-MR00160NC4070-NVSW219F-36-18S-2P		
PCB Material	ALU	Electrical Connection	
Operating Temperature (°C)	-40 ~ +105	Parallel	2
Storage Temperature (°C)	-40 ~ +105	Series	18
Thermal Conductivity (W/m-K)	1,5	LED Quantity	36
LED	NVSW219F		
Correlated Color Temperature (CCT)	4000K		
Color Rendering Index (CRI)	70+		
Module Operating Voltage (V)	50	51	52
Module Operating Current (mA)	1000	1200	1400
Branch Operating Current (mA)	500	600	700
Module Power (W)	50	61	72
Module Light Output (lm)	8374	9860	11297
Module Efficiency (lm/W)	166	161	156
LED	Z5-M3		
Correlated Color Temperature (CCT)	4000K		
Color Rendering Index (CRI)	70+		
Module Operating Voltage (V)	52	53	53
Module Operating Current (mA)	1000	1200	1400
Branch Operating Current (mA)	500	600	700
Module Power (W)	52	63	75
Module Light Output (lm)	8451	9916	11268
Module Efficiency (lm/W)	162	157	151

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

LED	Lumen Output Multiplier											
	1800K (CRI 70)	2000K (CRI 70)	2200K (CRI 70)	2500K (CRI 70)	2700K (CRI 70)	3000K (CRI 70)	3500K (CRI 70)	4000K (CRI 70)	4500K (CRI 70)	5000K (CRI 70)	5500K (CRI 70)	6500K (CRI 70)
NVSW219F	0,72	0,78	0,84	0,87	0,94	0,95	0,97	1,00	0,99	0,99	-	-
S1W0-3535407003-00000000-00006	-	-	-	-	0,80	0,88	0,94	1,00	-	0,95	0,90	0,86

Relative luminous intensity versus CCT (K)

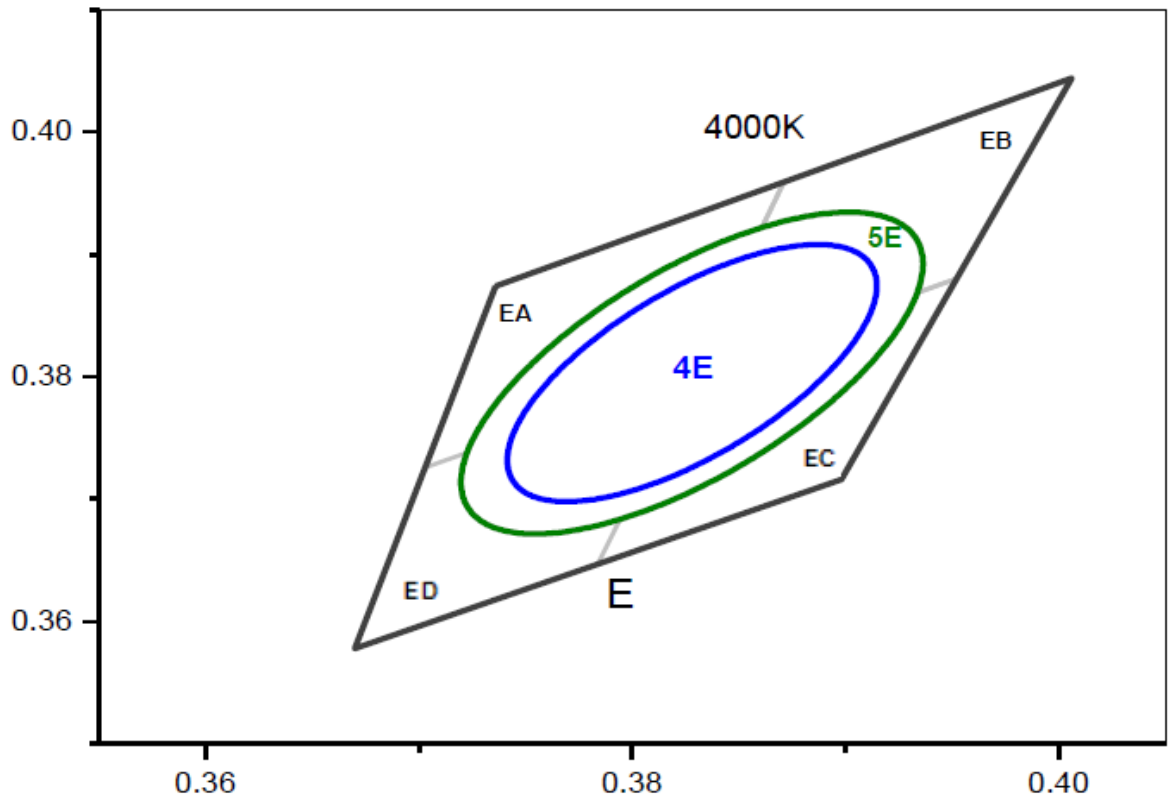
X-MR00160NC4070-NVSW219F-36 MECHANICAL DRAWINGS



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
Stock code No		MALZEME (MATERIAL)		AGIRLIK (WEIGHT)		
Revision		PMMA		XXX		
Date		16.09.2019		TLS-001-15R00160NC-36-R2		
Sheet						
Drawn By		Ibrahim OKMEN		OLÇEK / SCALE		
Checked By		Ibrahim OKMEN		1 / 1		
Approved By		Mesut CINAR		A3		
				TD Lighting Solutions		

CCT AND BINNING INFORMATION

CIE Chromaticity Diagram (Neutral White), $T_j=85^{\circ}\text{C}$, $I_F=700\text{mA}$



Ranking by Color Coordinates, Color Rendering Index		Ranking by Luminous Flux						
		D200	D220	D240	D260	D280	D300	D320
sm273,sm275,sm303,sm305	R8000							
	R9050							
sm353,sm355	R8000							
	R9050							
sm403,sm405,sm503,sm505,sm573,sm575	R8000							
	R9050							
sm453,sm455,sm653,sm655	R8000							

LIFE TIME

MODEL NUMBER: NVSW219F

Part No. NVSW219F

Issue Date: November 4, 2020 Revision Date: -
 Test Initiation Date: March 29, 2018 Test Completion Date: June 19, 2020
 Test Duration: 10,000 hours Report No.: SQETMS534401

Customer Information:

Company Name: Nichia Corporation
 Address: 491-100, Oka, Kaminaka-cho, Anan-shi, Tokushima, 774-8601, JAPAN

Description of Test Samples:

Manufacturer's Name: Nichia Corporation
 Classification: LED Package
 Part Name: White LED
 Part No.: NVSW219F
 Nominal CCT: 2700 K

Test Summary:

Data Set	Case Temperature [°C]	Ambient Temperature [°C]	Drive Current [mA]	Luminous Flux 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	98.6	0.0005	> 60000	> 60000	> 60000
2	55	> 50	1500	97.6	0.0007	> 60000	> 60000	> 60000
3	85	> 80	700	98.3	0.0005	> 60000	> 60000	> 60000
4	85	> 80	1200	97.7	0.0010	> 60000	> 60000	> 60000
5	85	> 80	1500	96.9	0.0015	> 60000	> 60000	> 60000
6	105	> 100	700	97.6	0.0007	> 60000	> 60000	> 60000
7	105	> 100	1200	95.8	0.0019	> 60000	> 60000	32100
8	105	> 100	1500	83.6	0.0019	15200	11200	7720 *

* The Lp value is reached experimentally in the course of LM-80 testing.

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