







## DRIVING CURRENT VS LUMEN OUTPUT SPECIFICATION

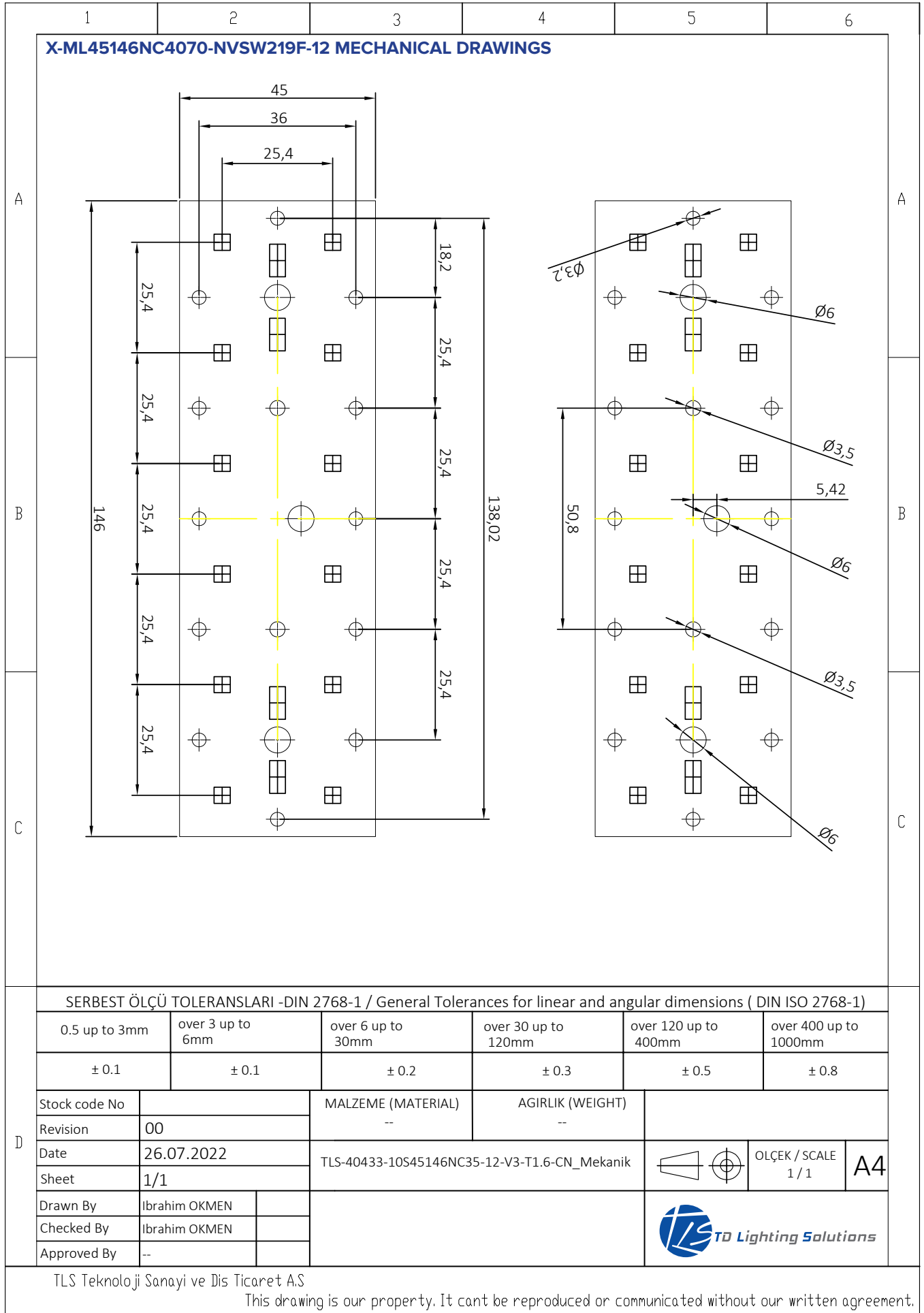
Common Characteristic [ @Tj : 85°C ] ;			
Module Code	X-ML45146NC40xx-NVSW219F-12		
PCB Material	ALU	Electrical Connection	
Operating Temperature (°C)	-40 ~ +100	Parallel	1
Storage Temperature (°C)	-40 ~ +55	Series	12
Thermal Conductivity (W/m-K)	1>	LED Quantity	12
<b>LED NVSW319B_R8000</b>			
Correlated Color Temperature (CCT)	4000K		
Color Rendering Index (CRI)	80+		
Module Operating Voltage (V)	32,64	34,08	35,88
Module Operating Current (mA)	350	700	1400
Branch Operating Current (mA)	350	700	1400
Module Power (W)	11,42	23,86	50,23
Module Light Output (lm)	1.885	3.602	6631
Module Efficiency (lm/W)	165	151	132
<b>LED NVSW219F-V1_R8000</b>			
Correlated Color Temperature (CCT)	4000K		
Color Rendering Index (CRI)	80+		
Module Operating Voltage (V)	33,48	34,8	36,72
Module Operating Current (mA)	350	700	1400
Branch Operating Current (mA)	350	700	1400
Module Power (W)	11,72	24,36	51,41
Module Light Output (lm)	1.875	3.557	6477
Module Efficiency (lm/W)	160	146	126
<b>LED NVSW219F_R70</b>			
Correlated Color Temperature (CCT)	4000K		
Color Rendering Index (CRI)	70+		
Module Operating Voltage (V)	33,48	34,8	36,72
Module Operating Current (mA)	350	700	1400
Branch Operating Current (mA)	350	700	1400
Module Power (W)	11,72	24,36	51,41
Module Light Output (lm)	2.109	3.946	7094
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)





## LIFE TIME

MODEL NUMBER: NVSW219F



Report No. : SQETMS534401

## LM-80 Test Report

This LM-80 testing is performed in accordance with IES LM-80-15.

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 $L_{50}(10K)$ [hours]	TM-21 Projection $L_{30}(10K)$ [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  $L_p$  value is reached experimentally in the course of LM-80 testing.

Approved Signatory:

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