

DSM Series Ultra Thin Surface Mount Single Digit 7-Segment LED Display

DSM7UA30105 - 0.30" (7.62mm) Digit Height Emitting Color: Pure Green (InGaN/GaN)

Applications

- People Movers
- Home Appliances
- Medical Devices
- Industrial Devices
- Automation and Controls
- Light Control

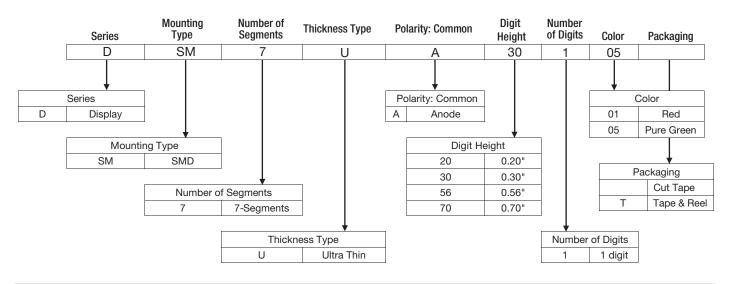
- IoT
- Transportation
- Food Service Appliances

Key Features

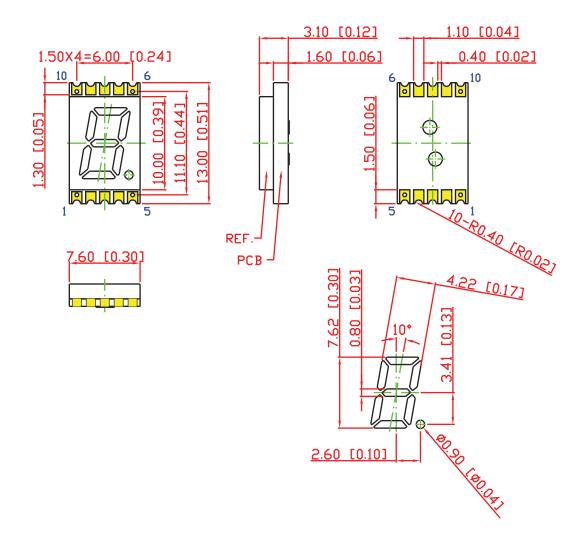
- 1-digit seven segment led numeric display
- Outer dimensions: 13.0 X 7.60 X 3.10mm
- Reduce overall thickness of PCB, with major cost savings
- Available in 4 different digit heights and widths
- Excellent character appearance, with high light output
- Super green chip
- Made from InGaN on transparent GaN substrate
- Made of white segments and gray surface
- Also available in super bright red
- Available in cut tape or automation-friendly tape and reel

- Exclusive patented technology
- Low current operation and lower power consumption
- Polarity: common anode
- Available for reverse mounting configuration
- Side by side mounting allows space saving
- Easy mounting on PC boards or sockets
- Moisture Sensitive Level (MSL): 2a
- Life expectancy: 100,000 hours
- Technically and mechanically rugged
- Quality tested with the highest industry standard

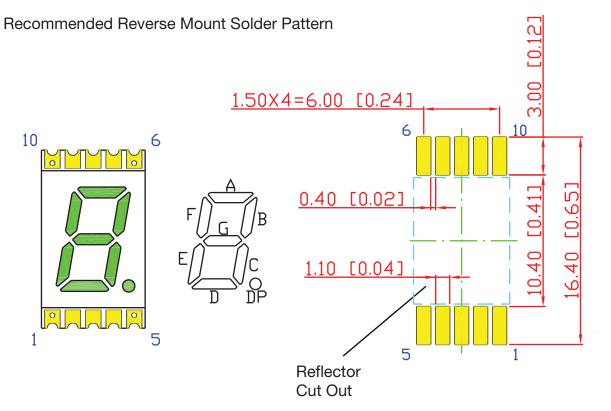
Ordering Data



Dimensions and Internal Circuit Diagram

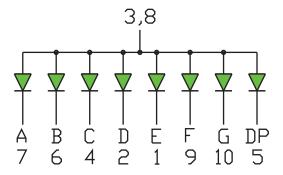


Tolerance is ±0.25mm [.01"] unless otherwise noted Dimensions in millimeters [inches]



 $\label{eq:Dimensions in millimeters [inches]} Tolerance is \pm 0.25 mm [.01"] unless otherwise noted$

Pin Connections (Common Anode)



PIN No	Connection
1	CATHODE E
2	CATHODE D
3	COMMON ANODE
4	CATHODE C
5	CATHODE DP
6	CATHODE B
7	CATHODE A
8	COMMON ANODE
9	CATHODE F
10	CATHODE G

Product Specifications

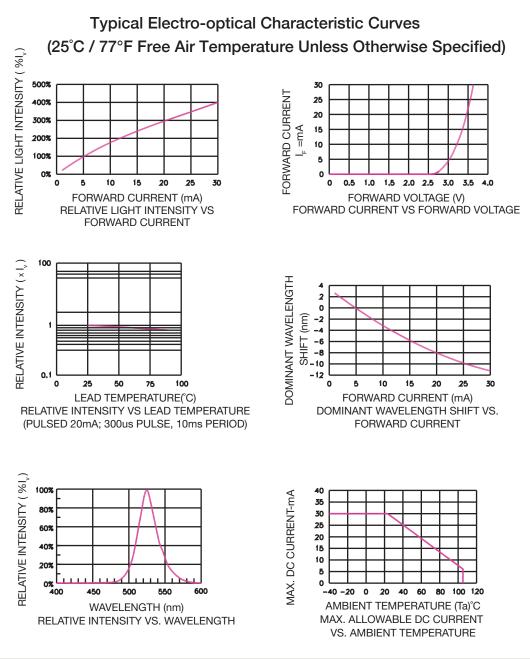
Absolute Maximum Rating at Ta=25°C / 77°F (Ta= Ambient Temperature)

Parameter	Symbol	Maximum Rating	Unit
Power dissipation	P _{AD}	120	mW
Derating liner from 25°C/77°F	-	0.30/9.46	mA °C / °F
Continuous forward current	I _{AF}	30	mA
Peak current (duty cycle 1/10, 1kHz)	I _{PF}	100	mA
Reverse voltage	V _R	5	V
Operating temperature	T _{OPR}	-40 TO +105 -40 TO +221	°C °F
Storage temperature	T _{STG}	-40 TO +105 -40 TO +221	°C °F

Electrical - Optical Characteristics at Ta=25°C / 77°F (Ta= Ambient Temperature)

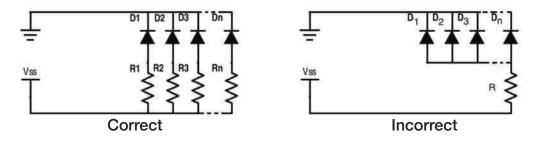
Charateristic	Symbol	Condition	Min.	Тур.	Max.	Unit
Forward Voltage, (Per Dice)	V _F	I _F =20mA	-	2.8	3.6	V
Reverse Current, (Per Dice)	I _R	V _R =8V	-	-	10	μA
Dominant Wavelength	λ_D	I _F =20mA	515	-	530	nm
Luminous Intensity	I _v	I _F =20mA	70	-	150	mcd
Spectral radiation bandwidth	Δλ	I _F =20mA	-	30	-	nm

Product Specifications

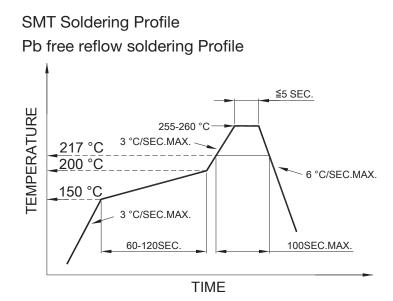


Circuit Design Notes

- Always use current limit resistors when necessary
- LEDs could be electrically connected in parallel, with each LED having its own current limiting resistor



• SMT Reflow Soldering Instructions



- We recommend the reflow temperature 245°C / 473°F (+/- 5°C / 41°F). The maximum soldering temperature should be limited to 260°C / 500°F.
- Number of reflow process shall be 2 time or less.

Soldering Iron

Basic spec is ≦4 sec when 260°C / 500°F. If temperature is higher, time should be shorter (+10°C / 50°F →1 sec). Power dissipation of Iron should be smaller than 15W, and temperature should be controllable. Surface temperature of the device should be under 230°C /446°F.

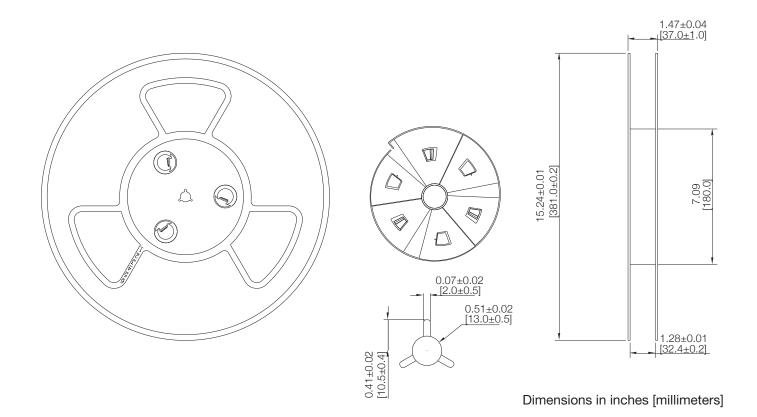
- Rework
 - Customer must finish rework within 3 sec. under 350°C / 662°F.
 - The head of soldering iron cannot touch copper foil.

Storage Condition

In factory original sealed ba	ag package
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TEMPERATURE COND	DITION		HUMIDITY CONDITION		
5°C ~ 30°C		Below 60%RH			
After opened and not in factory original sealed bag package					
TEMPERATURE CONDITION	HUMIDITY CONDITION		STORAGE TIME		
5°C ~ 30°C	Below 60%RH		Within 4 weeks (MSL as level 2a)		

Tape & Reel Dimensions



Circle 4.00±0.1 2.00±0.1 0.40±0.05 ¢ 4 -4 ¢ -¢ 4 ¢ ф --÷ 14.20±0.1 1.75±0.1 ومرزاوه RAARA وتناثاته 32.00±0.1 13.40±0. d d A Ò Ó Ċ r RRANK ARARĂ 民國開展於 rahrà RRARÈ **망망하**망하 $\oplus \oplus \oplus$ $\Phi \Phi \Phi$ $\oplus \oplus$ 8.10±0.1 <u>12.00±0.1</u> 3.60±0.1 Ellipse

1350PCS / 1 REEL

Dimensions in millimeters

Compliance and Approvals

