

TRIPLE DIGIT SMD DISPLAY (0.56")

LSTD515/6DGM-XX

DATA SHEET

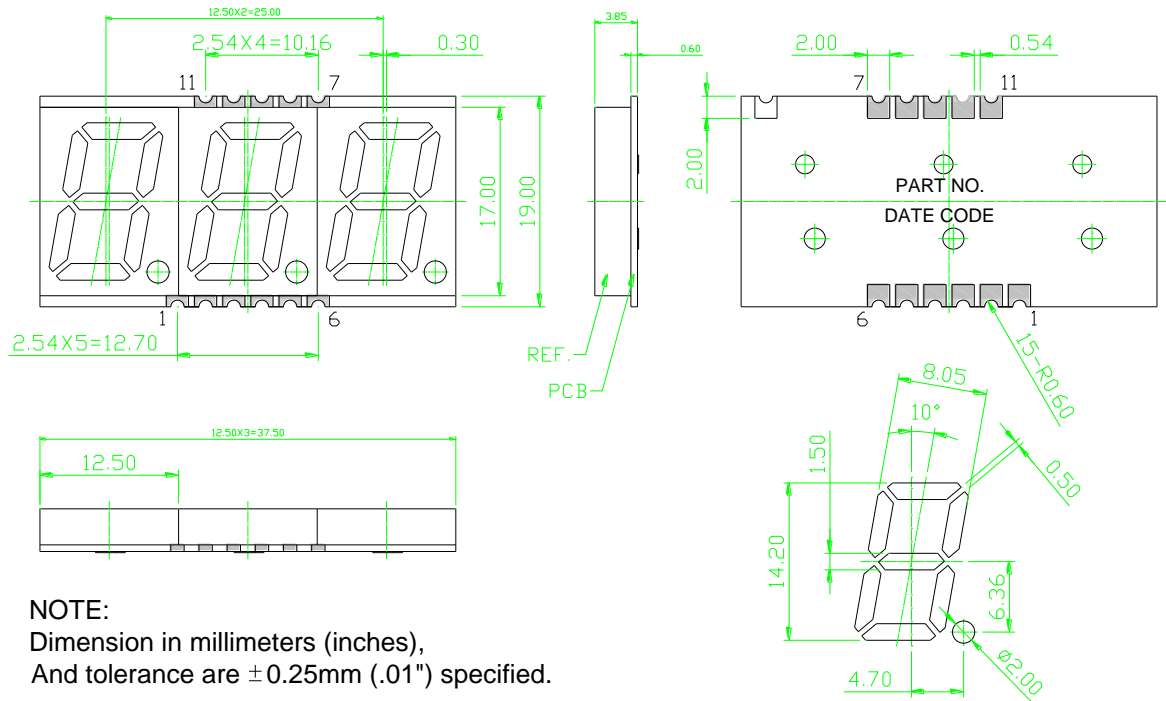
DOC.NO : QW0905- LSTD515/6DGM-XX

REV. : B

DATE : 26 – Oct. – 2020

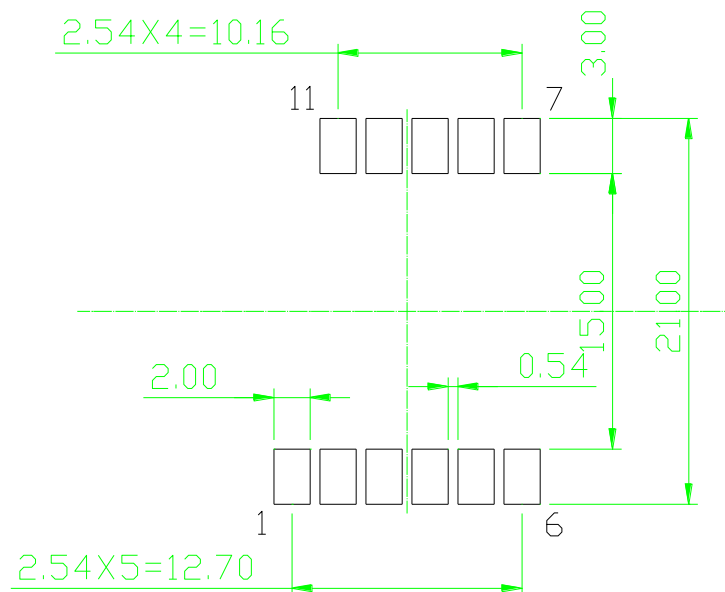


Package Dimensions

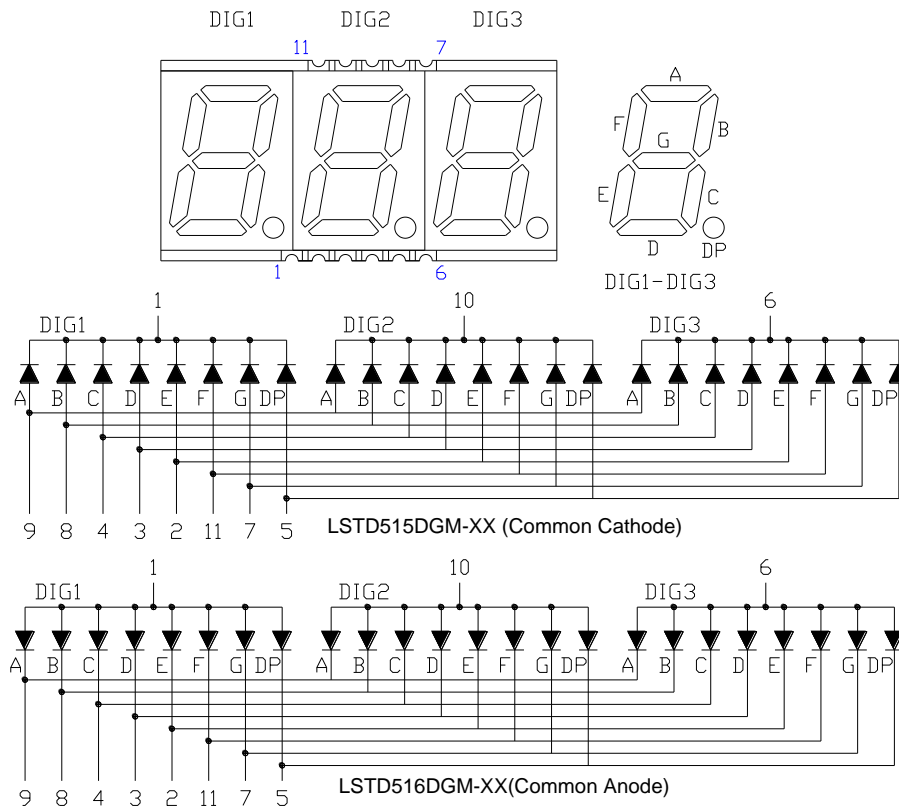


NOTE:
Dimension in millimeters (inches),
And tolerance are $\pm 0.25\text{mm}$ ($.01''$) specified.

Recommended Soldering Pad Dimensions



Internal Circuit Diagram



Electrical Connection

PIN NO.	LSTD515DGM-XX	PIN NO.	LSTD516DGM-XX
1	Common Cathode DIG 1	1	Common Anode DIG 1
2	Anode E	2	Cathode E
3	Anode D	3	Cathode D
4	Anode C	4	Cathode C
5	Anode DP	5	Cathode DP
6	Common Cathode DIG 3	6	Common Anode DIG 3
7	Anode G	7	Cathode G
8	Anode B	8	Cathode B
9	Anode A	9	Cathode A
10	Common Cathode DIG 2	10	Common Anode DIG 2
11	Anode F	11	Cathode F

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Ratings	UNIT
Power Dissipation	PD	90	mW
Peak pulse current Duty 1/10@1KHz	I _{FP}	60	mA
Continuous forward current	I _F	30	mA
Reverse voltage	VR	5	V
Storage Temperature	T _{stg}	-40 ~ +105	°C
Operating Temperature	T _{opr}	-40 ~ +105	°C

Typical Electrical & Optical Characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	IV	350	----	650	mcd	IF=20mA
Dominant Wavelength	λD	515	----	530	nm	IF=20mA
Spectral Line Half-Width	$\Delta \lambda$	----	30	----	nm	IF=20mA
Forward Voltage	VF	----	3.0	3.4	V	IF=20mA
Reverse Current	Ir	----	----	10	μA	VR=5V

Note : 1.The forward voltage data did not including $\pm 0.1V$ testing tolerance.
2.The luminous intensity data did not including $\pm 15\%$ testing tolerance.

Luminous Intensity Classification

BIN CODE	Iv(mcd) at 20mA	
	Min	Max
T	350	450
U	450.1	550
V	550.1	650

Dominant Wavelength Classification

BIN CODE	λ D(nm) at 20mA	
	Min	Max
1	515	520
2	520.1	525
3	525.1	530

Typical Electro-Optical Characteristics Curve

(25 °C Free Air Temperature Unless Otherwise Specified)

DGM: Super Bright RED (AlGaInP/GaAs) CURVE

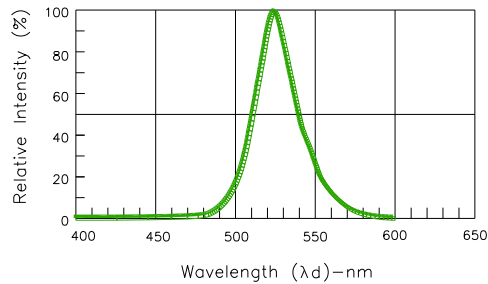


Fig.-1 Relative Intensity VS. Wavelength

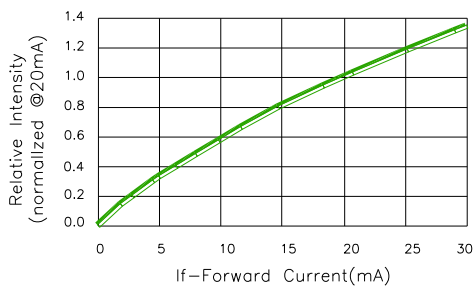


Fig.2-Relative Luminous Intensity vs. Forward Current

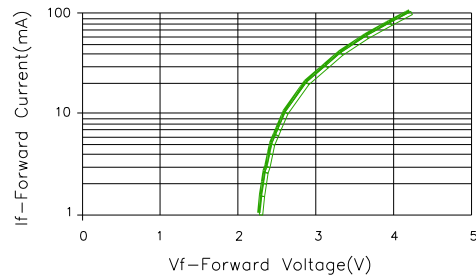


Fig.3-Forward Current vs. Forward Voltage

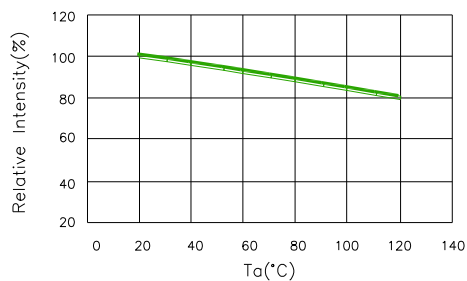


Fig.4-Relative Intensity(@20mA)VS. Ambient Temperature

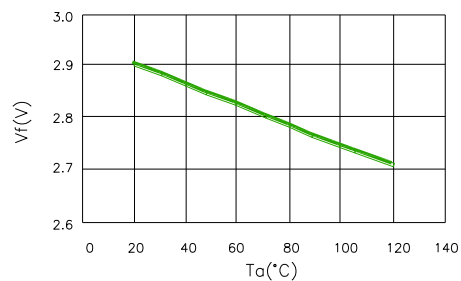


Fig.5-Forward Voltage(@20mA)VS. Ambient Temperature

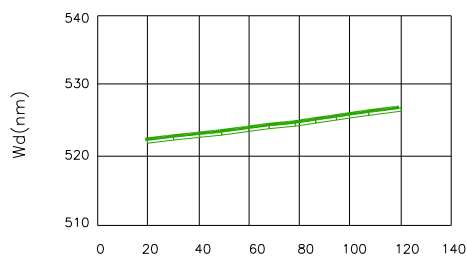


Fig.6-Dominant Wavelength(@20mA)
VS. Ambient Temperature

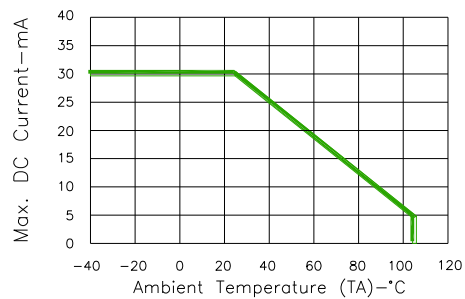
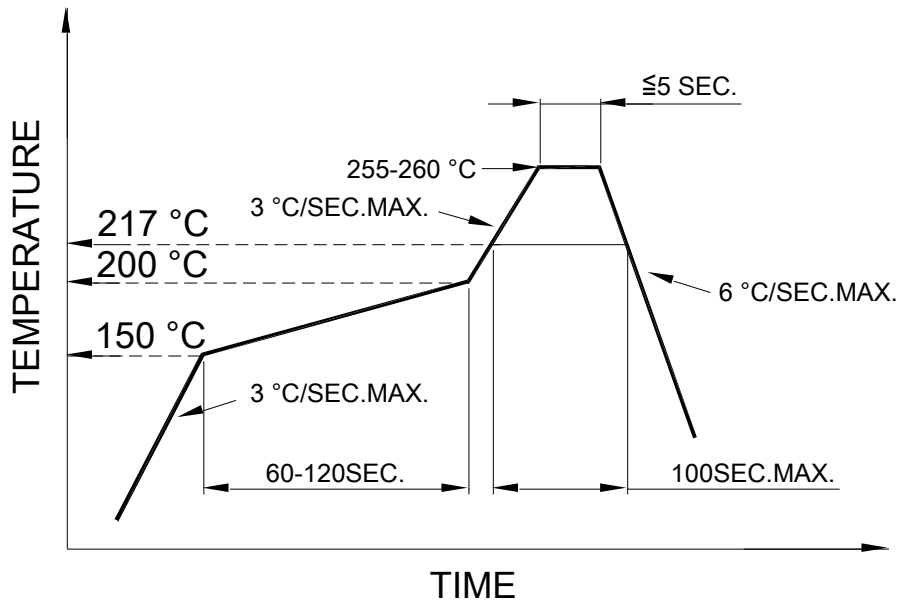


Fig.7-Max. Allowable DC Current
VS. Ambient Temperature

SMT REFLOW SOLDERING INSTRUCTIONS

SMT Soldering Profile

Pb free reflow soldering Profile



SOLDERING IRON

Basic spec is ≤ 4 sec when 260°C. If temperature is higher, time should be shorter (+10°C→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.

REWORK

Customer must finish rework within 3 sec. under 350°C.

The head of soldering iron cannot touch copper foil.

STORAGED CONDITION

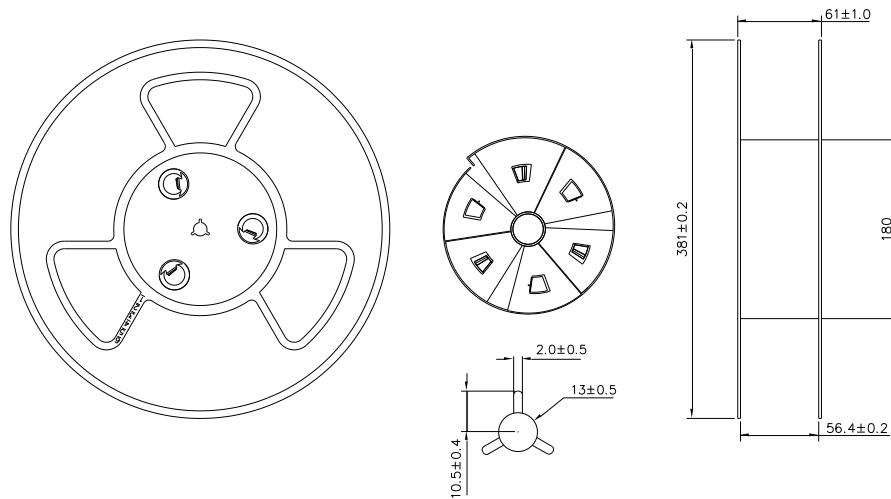
In factory original sealed bag package

TEMPERATURE CONDITION	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)

REEL DIMENSIONS



PACKING & LABEL SPECIFICATIONS

