

**MODEL:** TS38-9898-39-CL-450-SMT-TR | **DESCRIPTION:** TACTILE SWITCH**FEATURES**

- 14 V
- 70 gf

**SPECIFICATIONS**

parameter	conditions/description	min	typ	max	units
rated voltage		1		14	Vdc
rated current		0.01		50	mA
withstanding voltage	for 1 minute		250		Vac
contact resistance	applying load of 2 times operating force at 5 Vdc, 10 mA			100	mΩ
insulation resistance	at 100 Vdc for 1 minute	100			MΩ
operating force		380	450	520	gf
return force		70			gf
actuator travel		0.60	0.80	1.00	mm
operating temperature		-40		85	°C
storage temperature		-40		90	°C
life	at 14 Vdc, 10 mA, 2 cycles/second, max operating force		500,000		cycles
vibration	10~55~10 Hz, 1.5 mm amplitude, 2 hours on each XYZ				
flammability rating	see material table				
RoHS	yes				

## LED ABSOLUTE MAXIMUM RATINGS (TA=25°C)

parameter	conditions/description	min	typ	max	units
power dissipation [Pd]				75	mW
DC forward current [IF]				20	mA
peak forward current [IFP]	pulse of 1/10 duty and 0.1 ms width			80	mA
reverse voltage [VR]				5	V

## LED ELECTRO-OPTICAL CHARACTERISTICS (TA=25°C)

parameter	conditions/description	min	typ	max	units
forward voltage [Vf]	at IF=2 mA	2.6		3.0	V
luminous intensity [Iv]	at IF=2 mA	90	140		mcd
chromacity coordinates	at IF=2 mA white	X Y	0.258 0.260		
reverse current [IR]	at VR=5 V			5	µA
viewing angle [2θ1/2]	at IF=2 mA		120		deg

## LED ELECTRO-OPTICAL CHARACTERISTIC CURVES

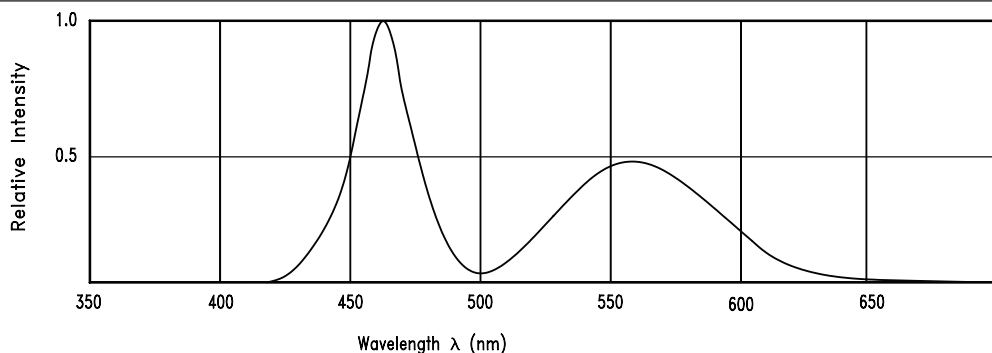


Fig.1 Relative Intensity vs. Wavelength

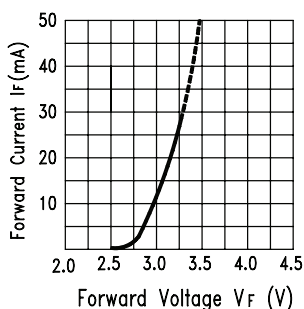


Fig.2 Forward Current vs. Forward Voltage

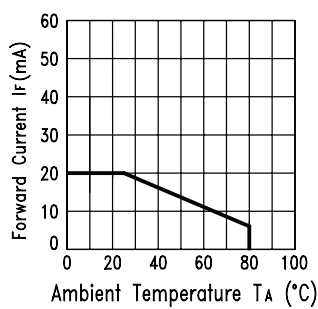


Fig.3 Forward Current Derating Curve

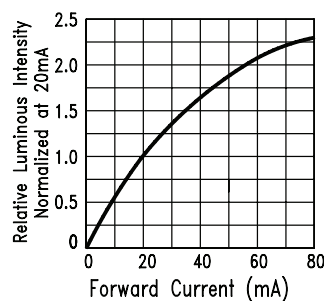


Fig.4 Relative Luminous Intensity vs. Forward Current

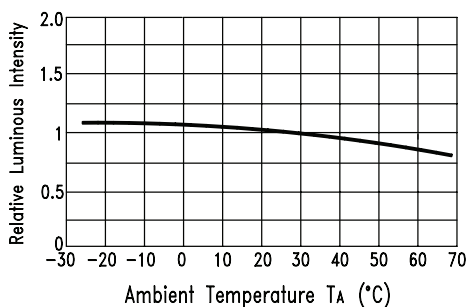


Fig.5 Luminous Intensity vs. Ambient Temperature

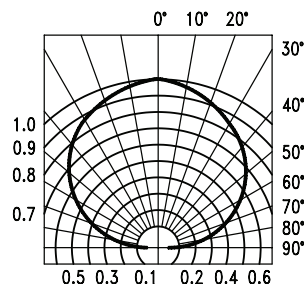
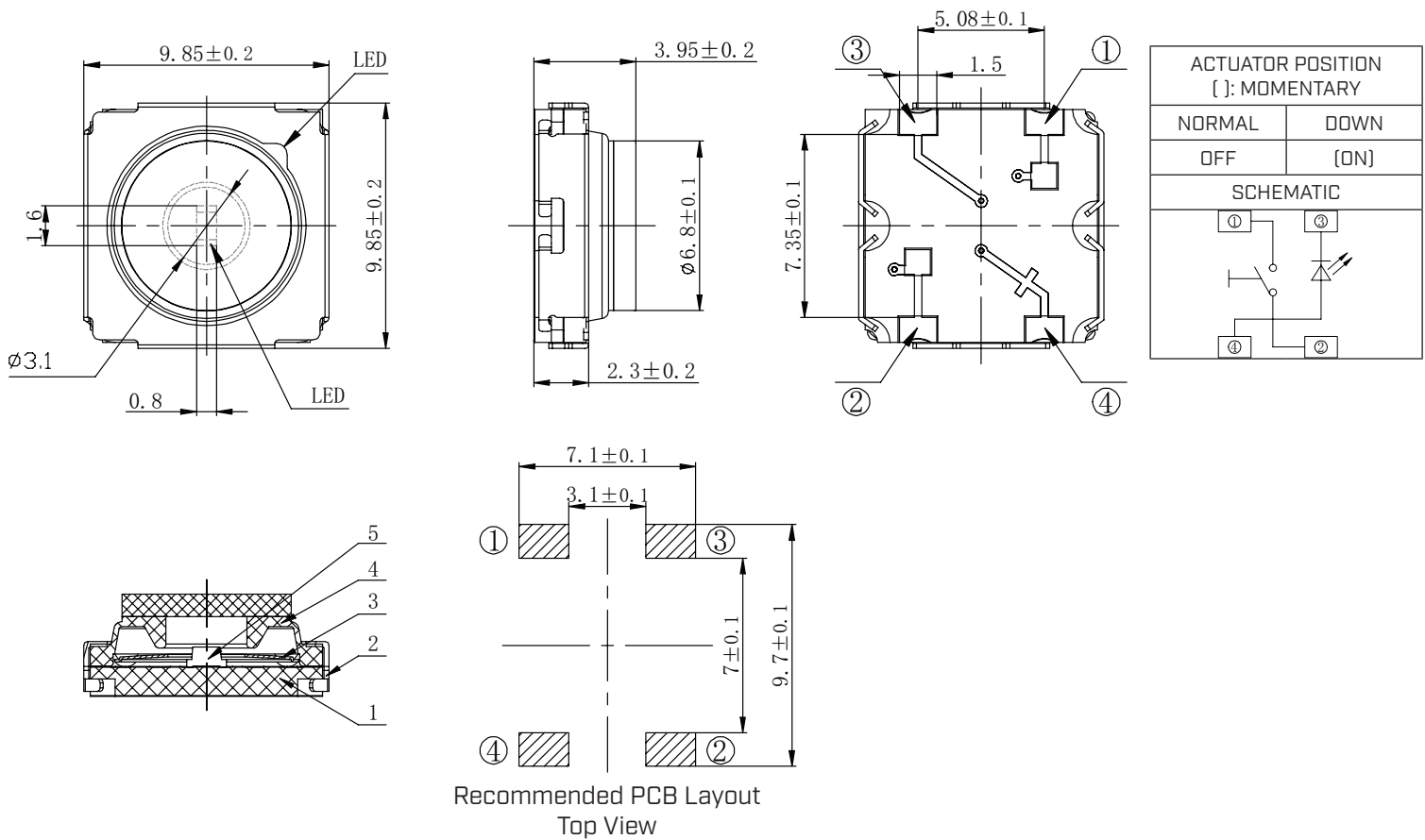


Fig.6 Spatial Distribution

## MECHANICAL DRAWING

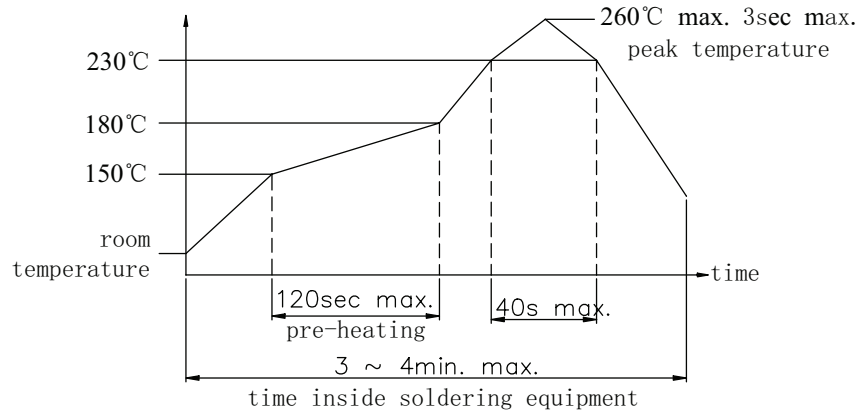
units: mm  
 tolerance:  $\pm 0.2$  mm  
 unless otherwise noted

ITEM	DESCRIPTION	MATERIAL	PLATING/COLOR
1	housing	FR-4	immersion gold
2	cover	SUS	--
3	contact	SUS	silver
4	stem	silicone	transparent
5	LED	--	white



## SOLDERABILITY

parameter	conditions/description	min	typ	max	units
hand soldering	for maximum 3 seconds			350	°C
reflow soldering	see reflow profile			260	°C

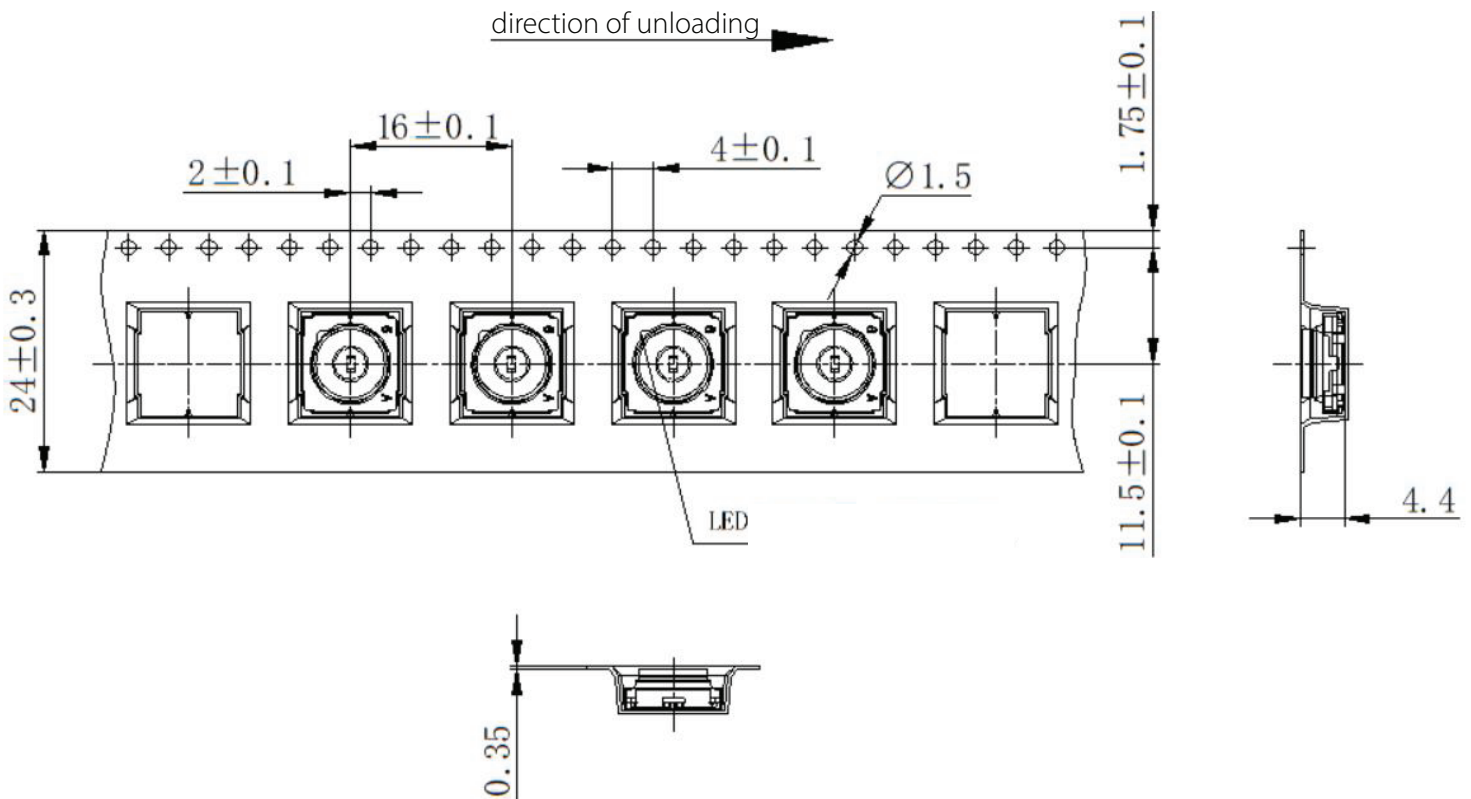


## PACKAGING

units: mm

Reel Size: Ø330 mm

Reel QTY: 850 pcs per reel



## REVISION HISTORY

rev.	description	date
1.0	initial release	11/20/2025

The revision history provided is for informational purposes only and is believed to be accurate.



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