

## Peak Emission Wavelength: 670nm, 770nm, 810nm, 850nm, 950nm

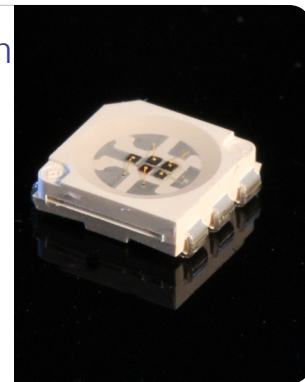
The MTMD6788594SMT6 is a multi-chip emitter designed for applications requiring same emission sources in a small, densely packaged area. These devices can be custom designed for specific wavelengths and outputs.

### FEATURES

- > PLCC-6 Package
- > High Reliability
- > High Output Power

### APPLICATIONS

- > Medical Instrumentation
- > Currency Validation
- > Biofluorescence Analysis



## Absolute Maximum Ratings (Ta=25°C)



ITEMS	SYMBOL	RATINGS					UNIT
		670	770	810	850	950	
Forward Current (DC)	IF	50	50	80	80	80	mA
Forward Current (Pulse)*1	IFP	0.3	0.5	0.5	0.5	0.5	A
Reverse Voltage	VR	5					V
Power Dissipation	PD	120	160	190	180	160	mW
Operating Temperature Range	Topr	-20 ~ +80					°C
Storage Temperature Range	Tstg	-30 ~ +100					°C

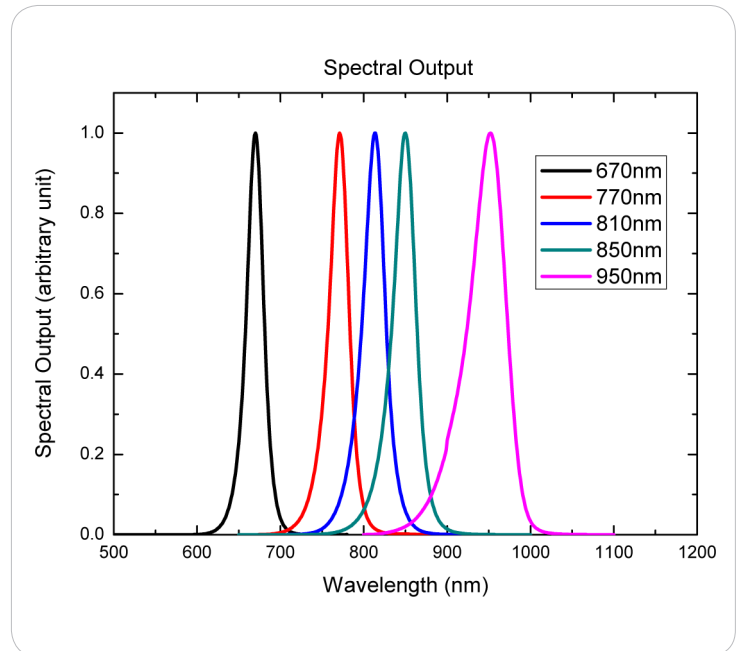
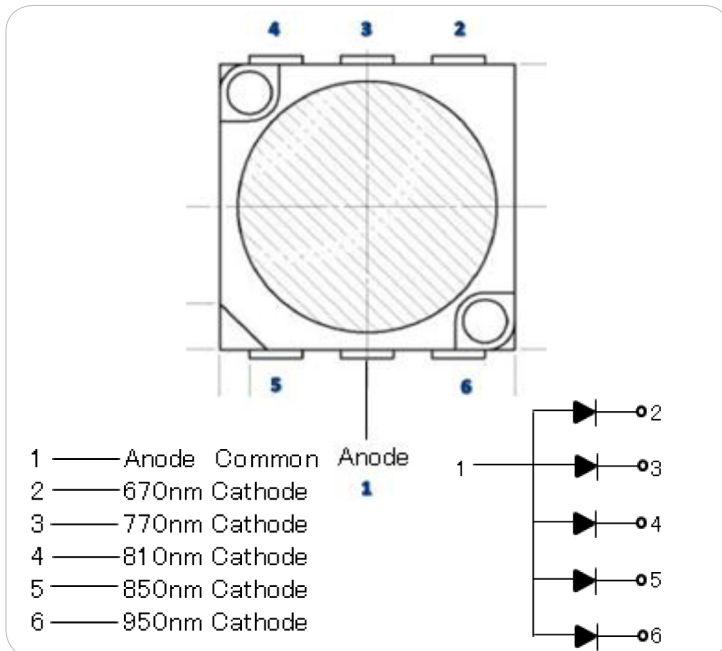
\*1: Tw=10μsec, T=10msec.

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

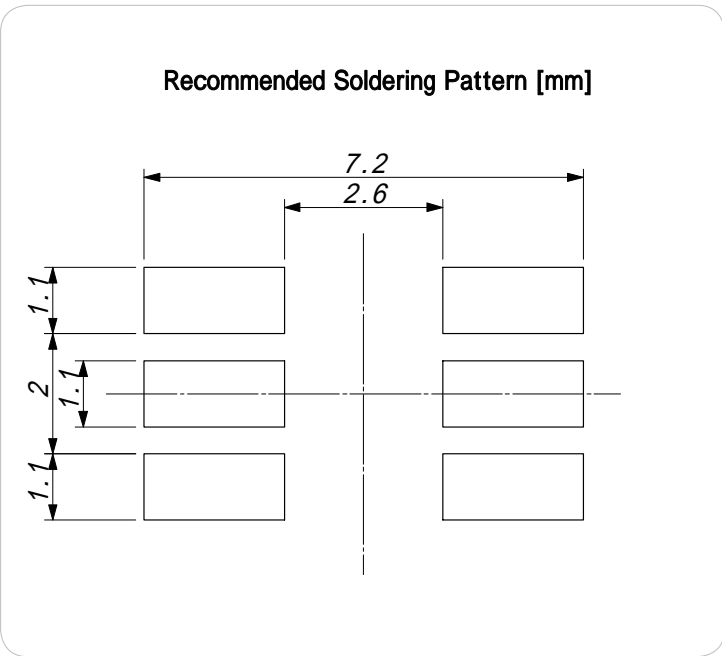
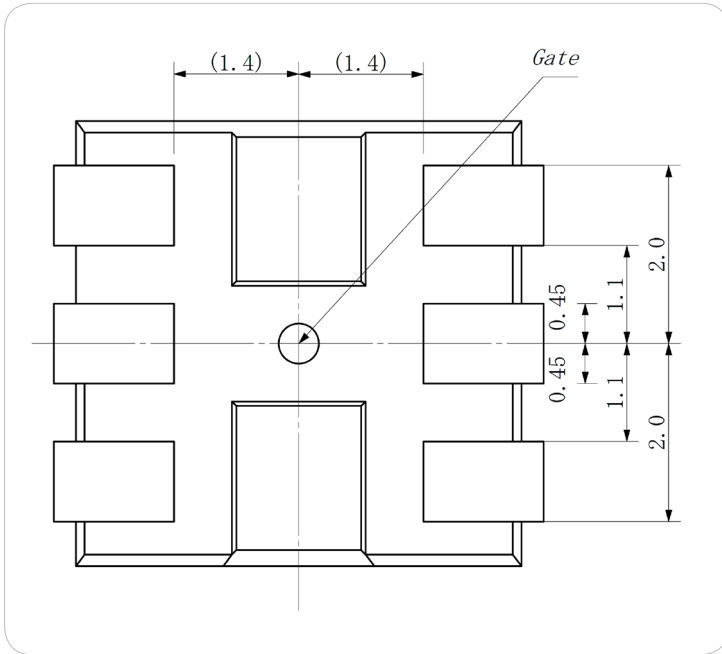
ITEMS	SYMBOL	WAVELENGTH	CONDITIONS	MIN	TYP	MAX	UNIT
Forward Voltage	VF	670	IF=20mA	--	1.8	2.2	V
Forward Voltage	VF	770	IF=20mA	--	1.65	1.9	V
Forward Voltage	VF	810	IF=20mA	--	1.50	2.1	V
Forward Voltage	VF	850	IF=20mA	--	1.45	1.9	V
Forward Voltage	VF	950	IF=20mA	--	1.25	1.9	V
Reverse Current	IR		VR=5V	--	--	100	μA
Power Output	PO	670	IF=20mA	--	5.2	--	mW
Power Output	PO	770	IF=20mA	--	6.3	--	mW
Power Output	PO	810	IF=20mA	--	5.2	--	mW
Power Output	PO	850	IF=20mA	--	4.7	--	mW
Power Output	PO	950	IF=20mA	--	7.6	--	mW

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

ITEMS	SYMBOL	WAVELENGTH	CONDITIONS	MIN	TYP	MAX	UNIT
Peak Emission Wavelength	$\lambda_p$	670	IF=20mA	--	670	--	nm
Peak Emission Wavelength	$\lambda_p$	770	IF=20mA	--	770	--	nm
Peak Emission Wavelength	$\lambda_p$	810	IF=20mA	--	810	--	nm
Peak Emission Wavelength	$\lambda_p$	850	IF=20mA	--	850	--	nm
Peak Emission Wavelength	$\lambda_p$	950	IF=20mA	--	950	--	nm
Spectral Line Half Width	$\Delta\lambda$	670	IF=20mA	--	25	--	nm
Spectral Line Half Width	$\Delta\lambda$	770	IF=20mA	--	35	--	nm
Spectral Line Half Width	$\Delta\lambda$	810	IF=20mA	--	35	--	nm
Spectral Line Half Width	$\Delta\lambda$	850	IF=20mA	--	35	--	nm
Spectral Line Half Width	$\Delta\lambda$	950	IF=20mA	--	45	--	nm







Unit: mm, Tolerance:  $\pm 0.2$

**Soldering Conditions:**

**(1) Reflow Soldering**

- a. Please implement the following temperature profile.
- b. Please do not handle the product until it has returned to ambient temperature.

**(2) Hand Soldering**

- a. Soldering tip temperature must be under 320°C.
- b. Soldering must be done within 3 seconds each.
- c. When soldering, do not add pressure to the resin portion.
- d. Please do not handle the product until it has returned to ambient temperature.

Reflow Soldering Temperature-Profile [Pb free Soldering] (Recommend condition)

