

SMTT850D-2*50

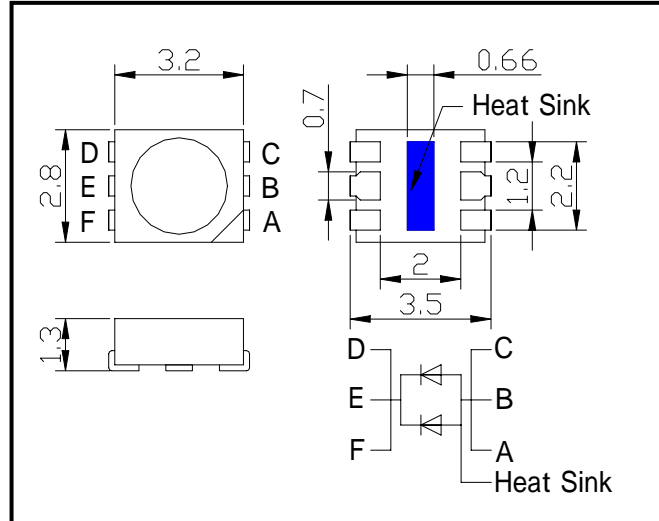
High Performance Infrared TOP LED

SMTT850D-2*50 consists of two large AlGaAs LED mounted on the lead frame as TOP LED package with copper heat sink and is 42mW typical of output power and 20mW/sr of radiant Intensity. This is adequate for strobe flash light and able to emit 0.8W/sr light operating at pulsed current 4A under 3.5V typ. It emits a spectral band of radiation at 850nm.

◆ Specifications

- | | |
|---------------------|---------------|
| 1) Product Name | TOP IR LED |
| 2) Type No. | SMTT850D-2*50 |
| 3) Chip | |
| (1) Chip Material | AlGaAs |
| (2) Chip Dimension | 500um*500nm |
| (3) Chip Numbers | 2pcs |
| (4) Peak Wavelength | 850nm typ. |
| 4) Package | |
| (1) Lead Frame Die | Silver Plated |
| (2) Package Resin | PPA Resin |
| (3) Cap Resin | Clear Epoxy |
| (4) Heat Sink | Copper |

◆ Outer dimension (Unit:mm)



◆ Absolute Maximum Rating

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	P _D	300	mW	T _a =25°C
Forward Current	I _F	200	mA	T _a =25°C
Pulse Forward Current	I _{FP}	4000	mA	T _a =25°C
Reverse Voltage	V _R	5	V	T _a =25°C
Operating Temperature	T _{OPR}	-20 ~ +80	°C	
Storage Temperature	T _{STG}	-30 ~ +80	°C	
Soldering Temperature	T _{SOL}	255	°C	

‡Pulse Forward Current condition: Duty=1% and Pulse Width=10us.

‡Soldering condition: Soldering condition must be completed within 10 seconds at 255°C

◆ Electro-Optical Characteristics [T_a=25°C]

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V _F	I _F =100mA DC		1.45	1.60	V
		I _{FP} =4A		3.5	4.2	
Reverse Current	I _R	V _R =5V			10	uA
Total Radiated Power	P _O	I _F =100mA DC	32.0	42.0		mW
Radiant Intensity	I _E	I _F =100mA DC		20		mW/sr
		I _{FP} =4A		800		
Peak Wavelength	λ _P	I _F =50mA DC	835	850	865	nm
Half Width	Δλ	I _F =50mA DC		28		nm
Viewing Half Angle	θ _{1/2}	I _F =50mA DC		±60		deg.
Rise Time	t _r	I _F =50mA DC		15		ns
Fall Time	t _f	I _F =50mA DC		10		ns

‡Total Radiated Power is measured by Photodyne #500

‡Radiant Intensity is measured by Tektronix J-6512.

‡Heat sink should be provided by soldering for stable use.