CREATIVE GMBH LED®

Preliminary Product Specification

CSM63851-CSM63854PEK 900nm SMD Phototransistor

Features

* SMD Phototransistor with separate Base for general purpose
* Hfe current gain selected groups
* **Narrow Response Angle of typ. 25°**
* Daylight filtered black housing optimized for 850nm /870nm LED
* Optical and Mechanical matched with LED CQM55557AFA, CQM55551AFA (870nm) CQM35592ADA (850nm), CQM35608AFA (940nm)

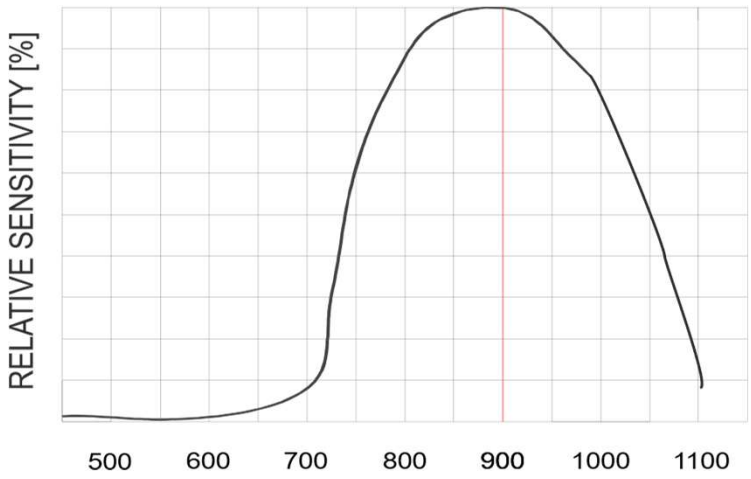
Optical and Electrical Characteristics @Tambient =25°C

Symbol	Parameter	MIN	Typ	MAX	UNIT	Test conditions
I_{Light}	Light Current CSM63851	0,7	2		mA	Vce = 10V ; Ee = 0,5mW/cm² @940nm
I_{Light}	Light Current CSM63852	1,5	3		mA	Vce = 10V ; Ee = 0,5mW/cm² @940nm
I_{Light}	Light Current CSM63853	3	5		mA	Vce = 10V ; Ee = 0,5mW/cm² @940nm
I_{Light}	Light Current CSM63854	4	7		mA	Vce = 10V ; Ee = 0,5mW/cm² @940nm
I_{CEO}	Collector Dark Current			100	nA	Vceo = 10 V ; Ev=0
$V_{(BR)CEO}$	Collector Emitter Breakdown Voltage	30			V	Ic = 100 µA ; Ib = 0
$V_{(BR)ECO}$	Emitter Collector Breakdown Voltage	5			V	Ie = 100 µA ; Ib = 0
V_{CEsat}	Collector-Emitter Saturation Voltage		0,3		V	Ib = 100µA Ic = 2mA
λ_{peak}	Wavelength of Peak Sensitivity		900		nm	max. sensitivity
$\lambda_{0,5}$	Range of Spectral Bandwidth	720		1150	nm	I = 10%, typical
t_f	Fall Time		15		µS	Vce = 5V ; Ic = 1mA ; RL = 1KΩ
t_r	Rise Time		15		µS	Vce = 5V ; Ic = 1mA ; RL = 1KΩ
A	Active Array		0,145		mm²	
ß	Current Gain CSM63851	200		800		Vce = 5 V ; Ic = 2mA
ß	Current Gain CSM63852	500		1000		Vce = 5 V ; Ic = 2mA
ß	Current Gain CSM63853	800		1300		Vce = 5 V ; Ic = 2mA
ß	Current Gain CSM63854	1000		1800		Vce = 5 V ; Ic = 2mA
$2\Phi_{0,5}$	Full Response Angle	20	25		deg.	ΦE = 50%
C_{CEO}	Collector Emitter Capacitance		6		pF	VR = 0V ; f = 1Mhz; Ee = 0mW/cm²
$T_{Operating}$	Operating Temperature	-25		85	°C	
$T_{Storage}$	Storage Temperature	-30		100	°C	
$T_{Soldering}$	Soldering Temperature			260	°C	5mm from case @ max 5 sec.
R_{thJA}	Thermal Resistance		450		K/W	
P_{tot}	Total Power Dissipation			50	mW	Tamb 25°C

Pls. Contact us for more technical detail information !

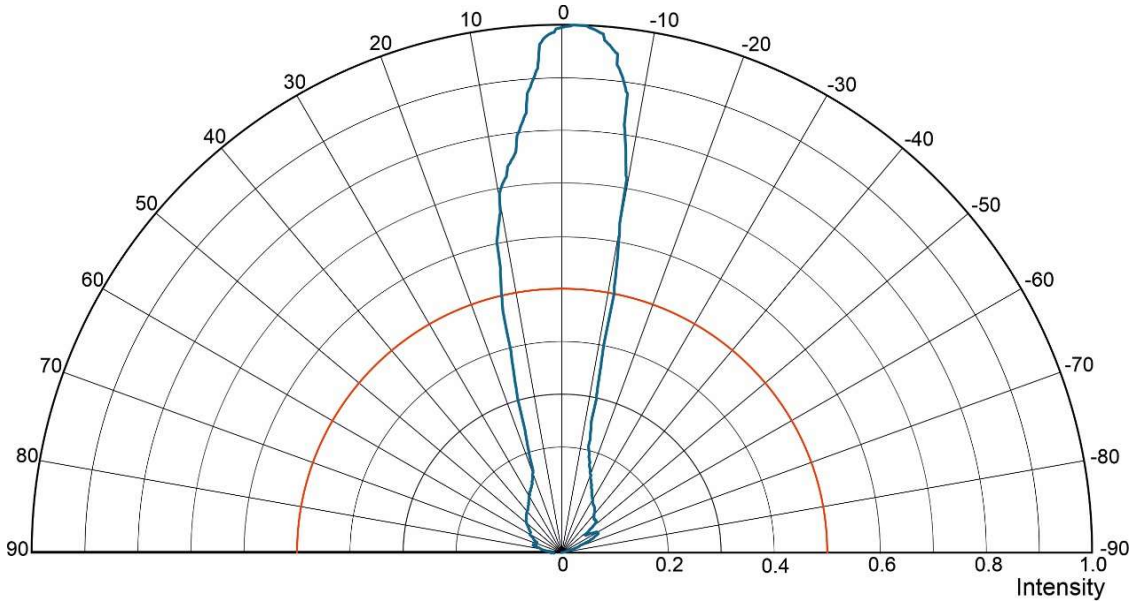
Relative Spectral Sensitivity

@ $T_{ambient}$ = 25°C



Relative Radiation Sensitivity

@ $T_{ambient}$ = 25°C



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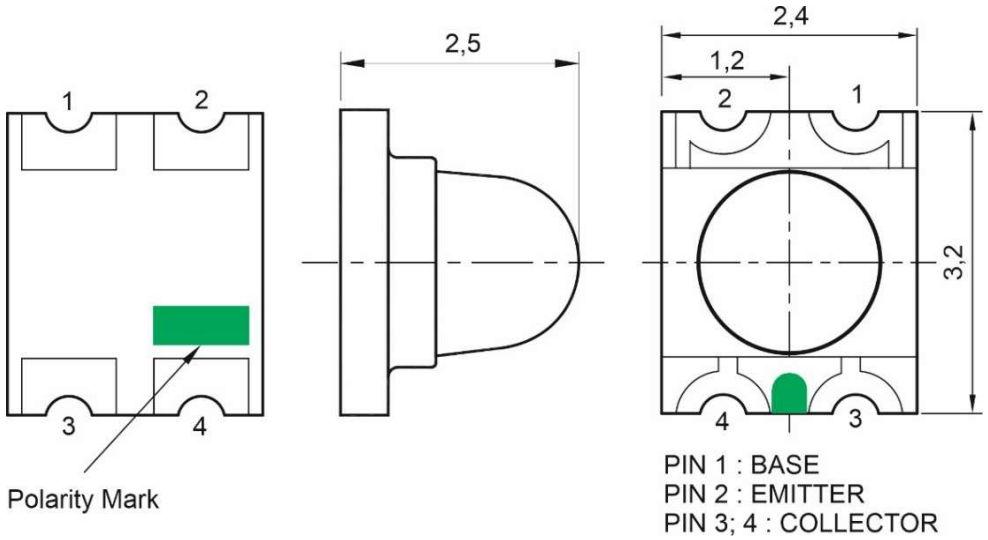
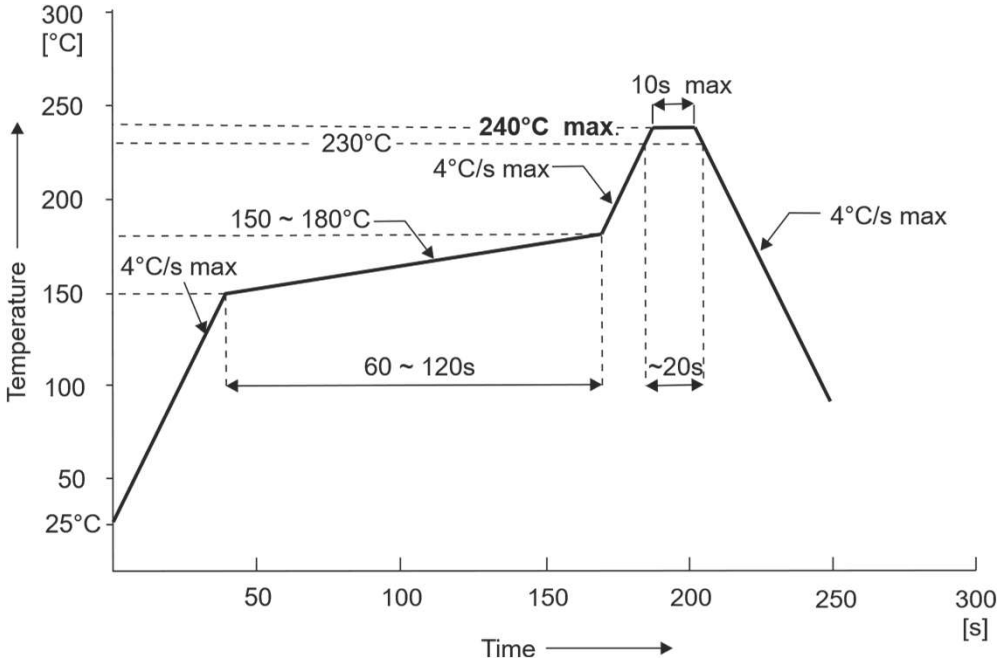
Mechanical Drawing



Soldering Profil



Order informations:

CSM63851PEK	Tape&reel (1500pcs/reel)
CSM63852PEK	Tape&reel (1500pcs/reel)
CSM63853PEK	Tape&reel (1500pcs/reel)
CSM63854PEK	Tape&reel (1500pcs/reel)