CREATIVE GMBH LED

Preliminary Product Specification

Phototransistor 18° CSR68531PDK

* 4.8mm Phototransistor with seperate Base for general purpose
* Mountable in row with 5mm distance
* **Small Response Angle of typ. 18 degree**
* Daylight filtered black housing optimized for LED with 855nm - 870nm
* Mechanical matched with CQR65 LED-serie
* SMT-Version CSS68531PDK mountable in row with 5mm distance
* Current Gain selected

Optical and Electrical Characteristics @Tambient =25°C

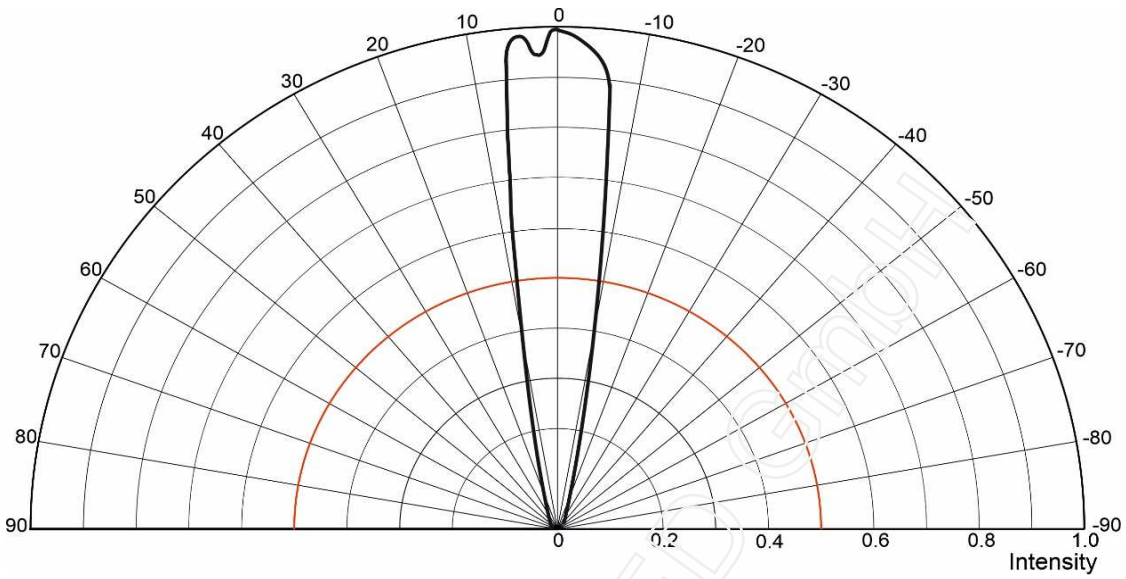
Symbol	Parameter	MIN	Typ	MAX	UNIT	Test conditions
I_{Light}	Collector Light Current	6,7	8,7		µA	Ee = 0,5mW/cm² @940nm ; Vr=10V
I_{CEO}	Collector Dark Current			70	nA	Ee = 0 mW/cm² ; Vr=10V
$V_{(BR)CEO}$	Collector Emitter Breakdown Voltage	30			V	Ic = 100 µA ; Ib = 0
$V_{(BR)ECO}$	Emitter Collector Breakdown 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	855	860	880	nm	max. sensitivity
$\lambda_{0,5}$	Range of Spectral Bandwidth	700		1100	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	800		1300		Vce = 5 V ; Ic = 2mA
$2\Phi_{0,5}$	Full Response Angle		18		deg.	ΦE = 50%
$T_{Operating}$	Operating Temperature	-30		85	°C	
$T_{Storage}$	Storage Temperature	-30		100	°C	
$T_{Soldering}$	Soldering Temperature			260	°C	Iron Soldering; 5mm from case @ max 5 sec.
R_{thJA}	Thermal Resistance		450		K/W	
P_{tot}	Total Power Dissipation			50	mW	Tamb 25°C

Order informations:

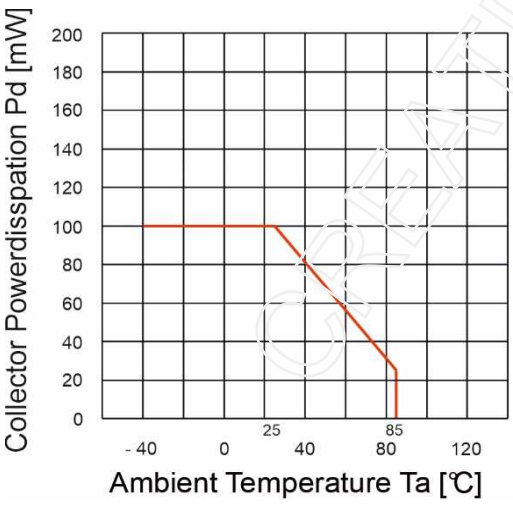
CSR68531PDK	Bulk (1000 pcs/Bag)
CSR68531PDK-TC	Bended according to customer specifications (on request)
CSR68531PDK-TR	Tape & Reel (1000 pcs./Reel) on request

Relative Radiation Sensitivity

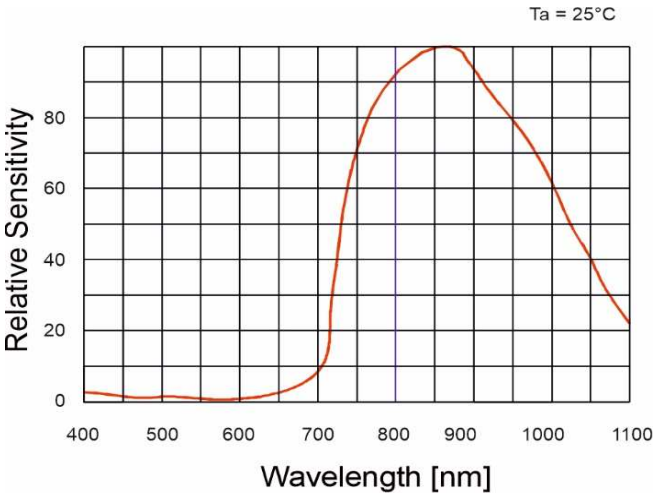
@ $T_{ambient}$ = 25°C



Collector Powerdisspation vs. Ambient Temperature



Relative Sensitivity vs. Wavelength



Pls. Contact us for more technical detail information !

CSR68531PDK

Mechanical Drawing