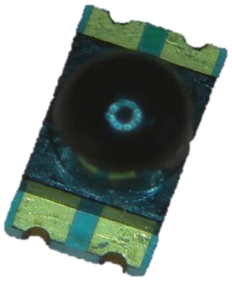
Product Specification

CSM23853TDK 19° Phototransistor

Features

* 1.80mm Phototransistor with separate base for general purpose
* Daylight filtered black housing
* Mechanical matched with CQR & CQM- LED-Series
* RoHs and REACH conform



Optical and Electrical Characteristics @Tambient =25°C

Symbol	Parameter	MIN	Typ	MAX	UNIT	Test conditions
I_{Light}	Light Current BIN A	2.5		3.5	mA	Ee = 0,5mW/cm² @940nm ; Vr=10V
I_{Light}	Light Current BIN A	3.51		5	mA	
I_{Light}	Light Current BIN A	5.01			mA	
I_{CEO}	Collector Dark Current			100	nA	Ee = 0 mW/cm² ; Vr=10V
$V_{(BR)CEO}$	Collector Emitter Breakdown Voltage	30			V	Ic = 100µA ; H = 0mW/cm²
$V_{(BR)ECO}$	Emitter Collector Breakdown Voltage	5			V	Ic = 100µA ; H = 0mW/cm²
V_{CEsat}	Collector-Emitter Saturation Voltage			0.3	V	Ib = 100µA Ic = 2mA
λ_{peak}	Wavelength of Peak Sensitivity		940		nm	max. sensitivity
$\lambda_{0.5}$	Range of Spectral Bandwidth	720		1050	nm	I = 10%, typical
$2\Phi_{0.5}$	Full Response Angle	18		20	deg.	ΦE = 50%
ß	Current Gain	TBA		TBA		Vce = 5 V ; Ic = 2mA
A	Active Area		0.144		mm²	
C_J	Junction Capacity		6		pF	VR=0V ; f=1MHz ; Ev=0Lux
$T_{Operating}$	Operating Temperature	-25		85	°C	
$T_{Storage}$	Storage Temperature	-25		100	°C	
$T_{Soldering}$	Soldering Temperature			260	°C	Iron Soldering; 5mm from case @ max 5 sec.
R_{thJA}	Thermal Resistance		2.3		K/W	
P_{tot}	Total Power Dissipation			43.25	mW	Tamb 25°C

* values only for information

Order informations:

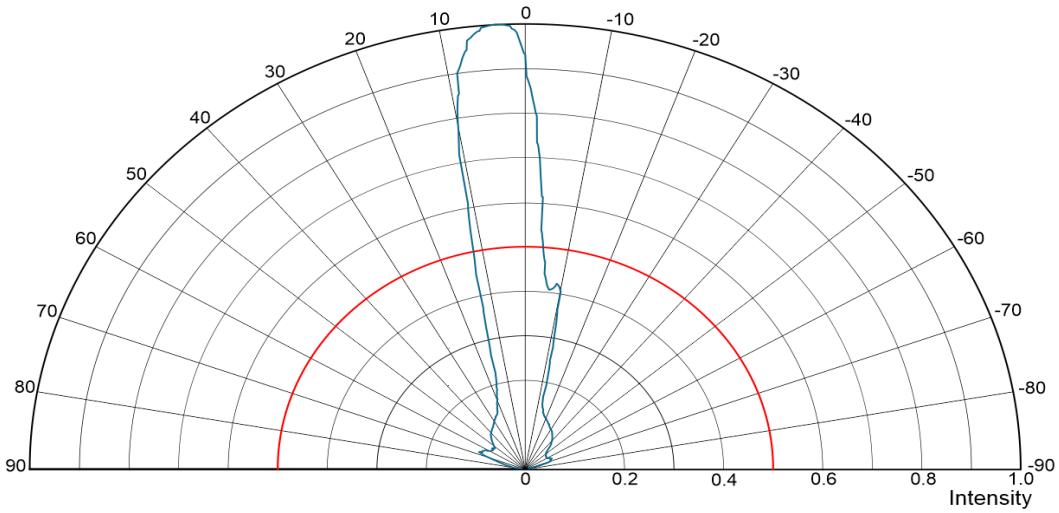
CSM23853TDK	Tape & Reel (1500pcs/reel)

Pls. Contact us for more technical detail information !

CREATIVE LED GMBH reserves the right to make changes at any time in order to improve design and to supply the best product possible, contact us for latest device specification sheets before using.

Relative Responsitivity Angle:

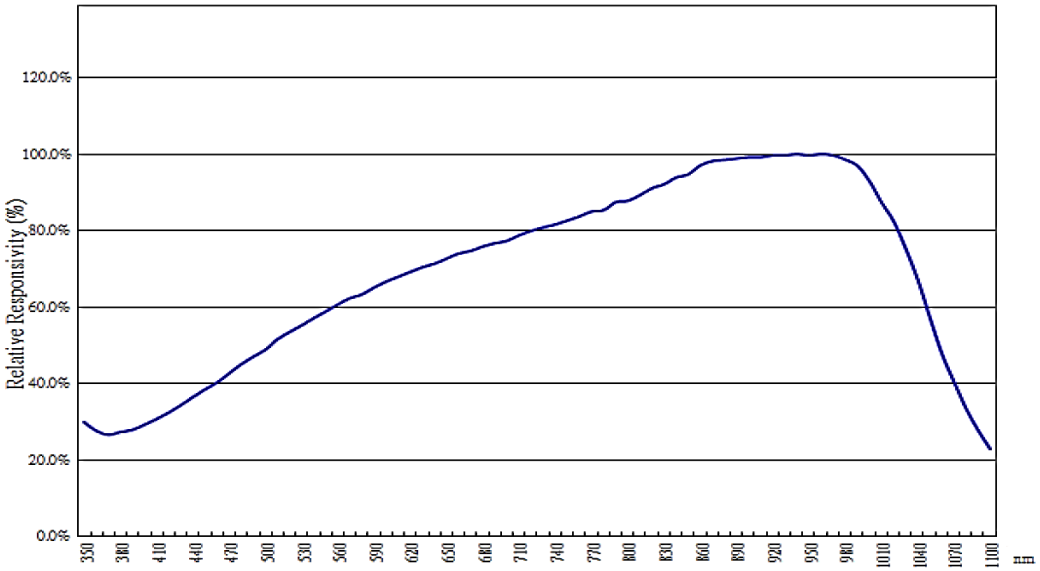
@ $T_{ambient}$ = 25°C



Order informations:

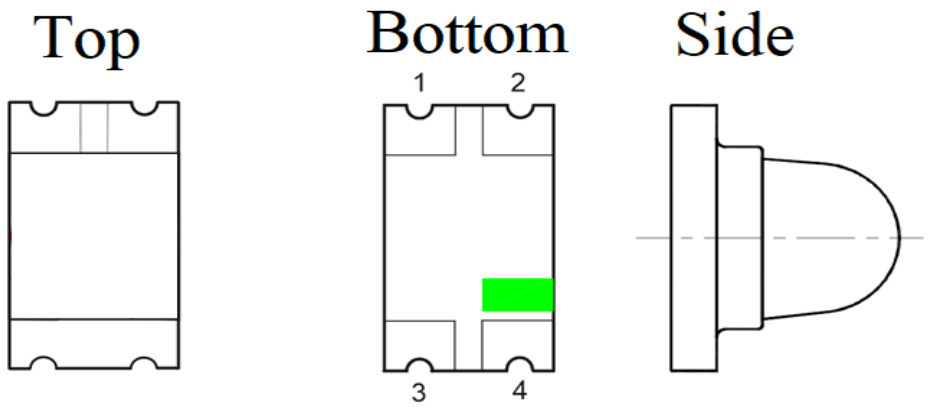
Phototransistor	CSM23853TDK	Taped in Reel (1500pcs/reel; lens top in the tape)

Relative Sensitivity vs. Wavelength:



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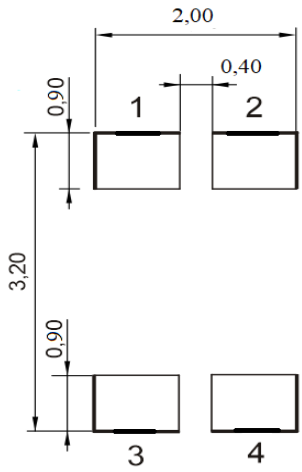
Mechanical Drawing:



PIN 1 : EMITTER
PIN 2 : BASE
PIN 3; 4 : COLLECTOR

Pls. Contact us for more technical detail information !

PCB drawing:



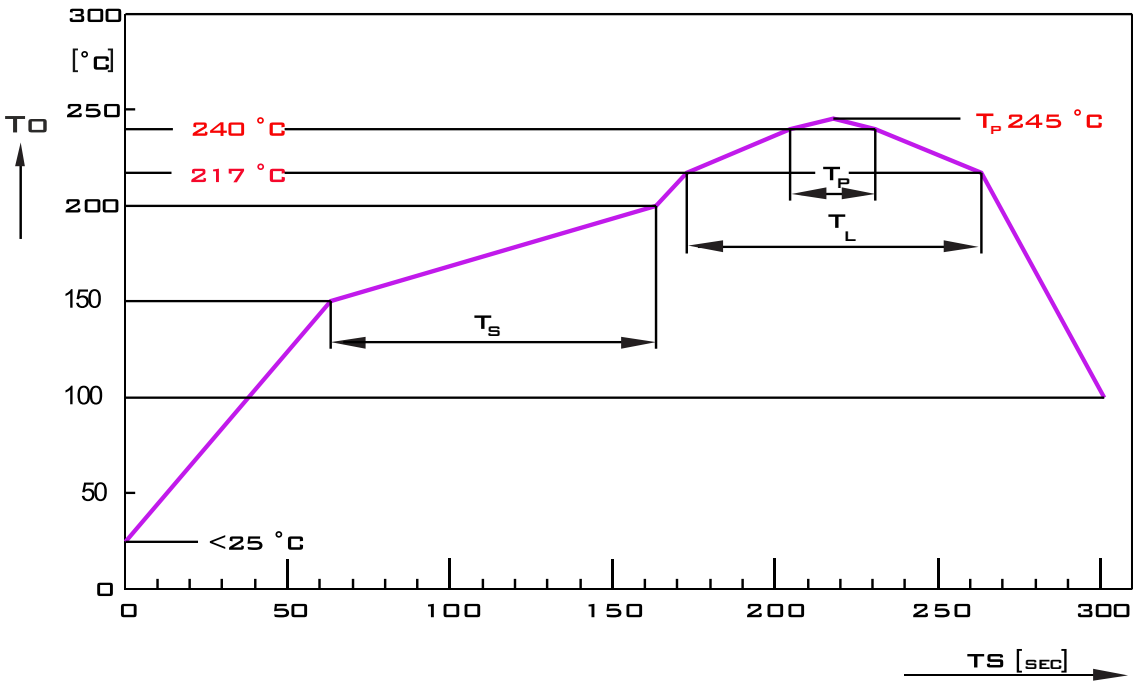
PIN 1 : EMITTER
PIN 2 : BASE
PIN 3; 4 : COLLECTOR

Note to Customer:
If you have any recommended modifications or adjustments to the PCB footprint or pin configuration, please feel free to share your suggestions.

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Reflow Soldering Profile:

PRECONDITIONING: JEDEC LEVEL 3 ACC. TO JEDEC J-STD-020D.01



PROFIL FEATURES		PB-FREE (SNAGCU) ASSEMBLY			UNIT
	SYMBOL	MINIMUM	RECOMMENDATION	MAXIMUM	
RAMP-UP RATE TO PREHEAT [1] 25 °C TO 150 °C			2	3	K/SEC
TIME T_S T_{SMIN} TO T_{SMAX}	T_S	60	100	120	SEC
RAMP-UP RATE TO PEAK [1] T_{SMAX} TO T_P			2	3	K/SEC
LIQUIDUS TEMPERATURE	T_L		217		°C
TIME ABOVE LIQUIDUS TEMPERATURE	T_L		80	100	SEC
PEAK TEMPERATURE	T_P		240	245/260[2]	°C
TIME WITHIN 5 °C OF THE SPECIFIED PEAKTEMPERATURE	T_{P-5K}	10	20	30	SEC
RAMP DOWN RATE T_P TO 100 °C			3	6	K/SEC
TIME 25 °C TO T_P			300	480[2]	SEC

ALL TEMPERATURES REFERS TO THE CENTER OF THE PACKAGES, MEASURED ON THE TOP OF COMPONENT

(1) SLOPE CALCULATION DT/DT: DT MAX.5 SEC. ; FULFILLMENT FOR THE WHOLE T-RANGE

(2) THESE MAXIMUM VALUES ARE STRONG DEPEND ON THE REFLOW-SOLDERING EQUIPMENT AND APPLICATION

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