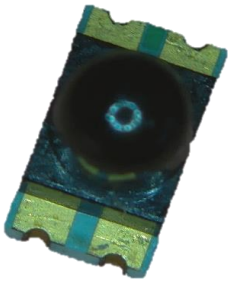
Product Specification

CSM836080FB 19° Phototransistor

Features

* 1.80mm Phototransistor with separate base for general purpose
* Mountable in row with -mm distance
* Current Gain selected
* Daylight filtered black housing
* Mechanical matched with CQR- 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	900		1400		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

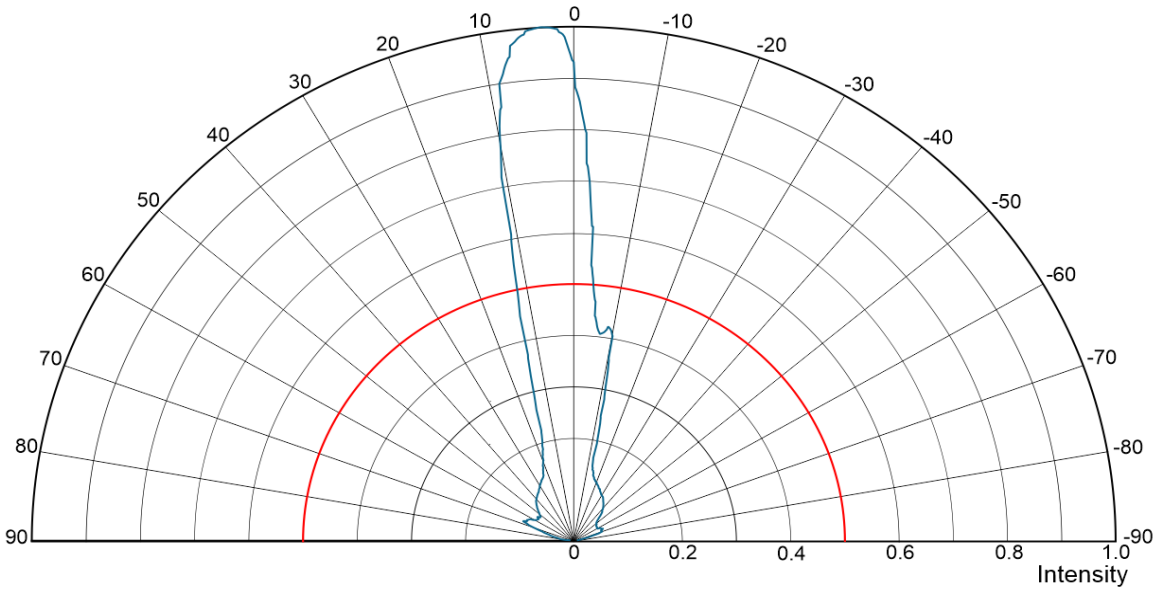
Order informations:

CSM836080FB	Tape & Reel (1500pcs/reel)

Pls. Contact us for more technical detail information !

Relative Responsitivity Angle:

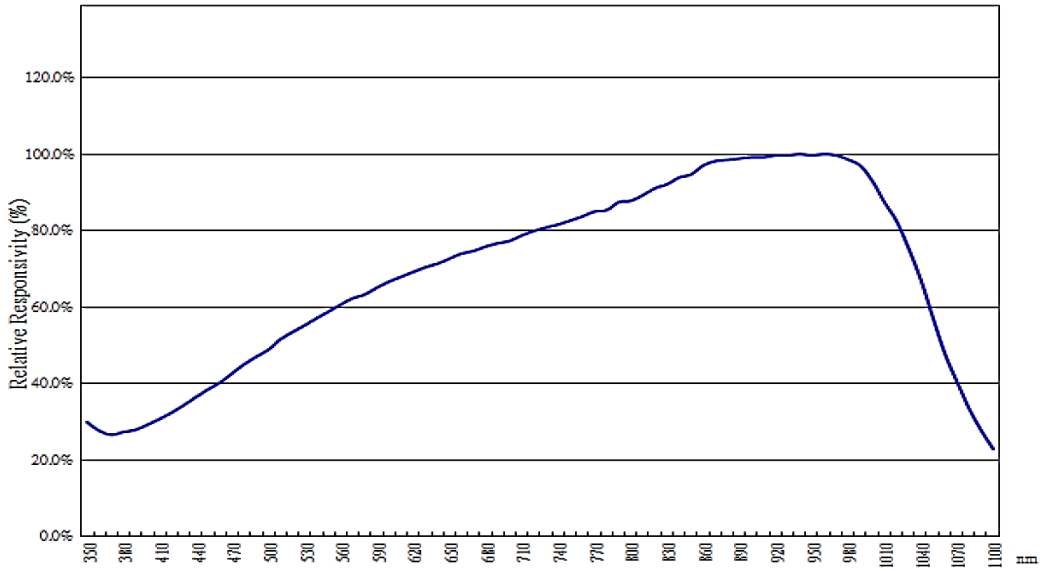
@ $T_{ambient}$ = 25°C



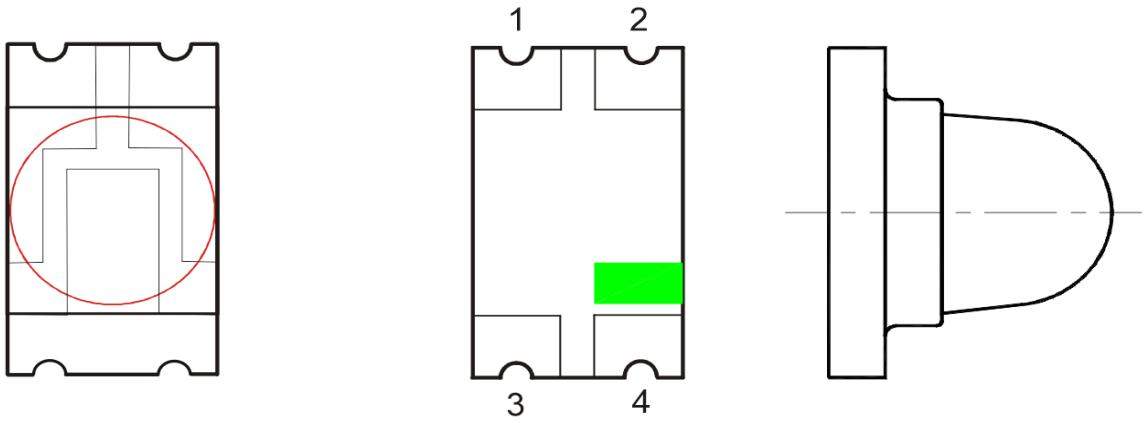
Order informations:

Phototransistor	CSM836080FB	Taped in Reel (1500pcs/reel; lens top in the tape)

Relative Sensitivity vs. Wavelength:



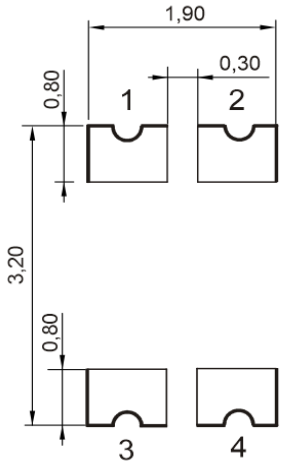
Mechanical Drawing:



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

Pls. Contact us for more technical detail information !

PCB drawing:

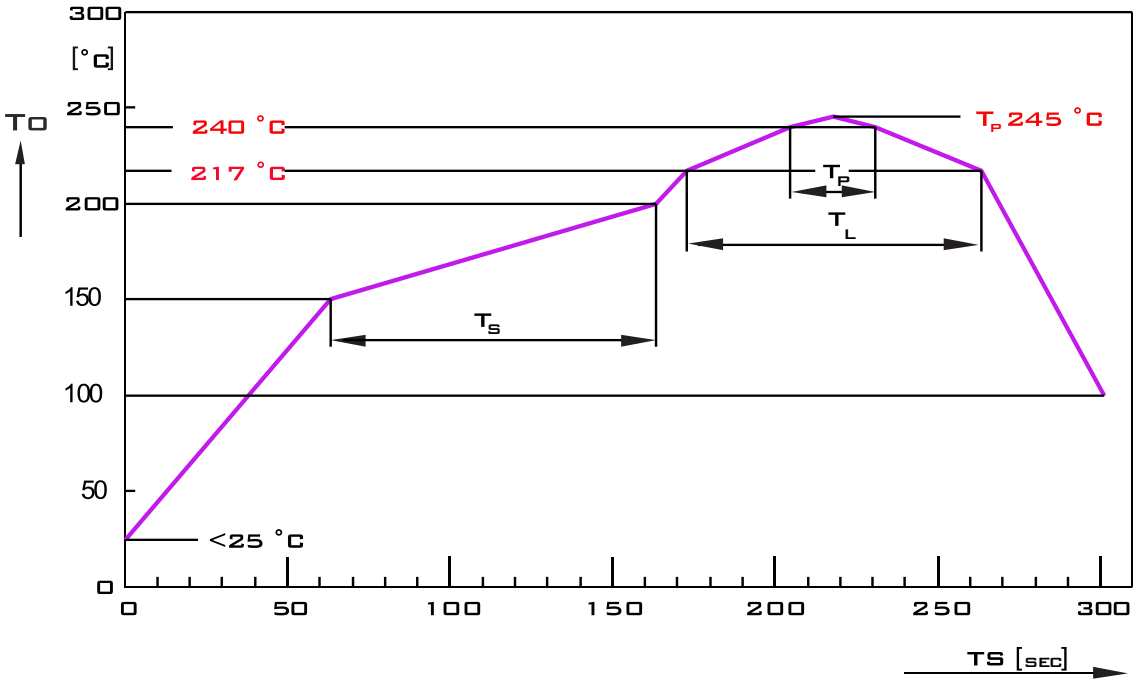


PIN 1 : EMITTER
PIN 2 : BASE
PIN 3; 4 : COLLECTOR

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.

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