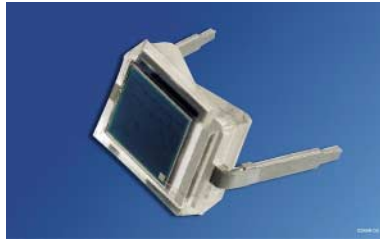
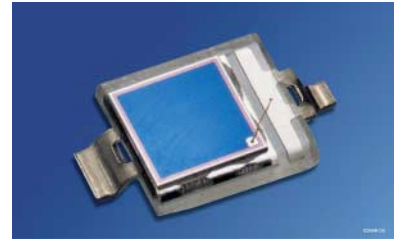


Silizium-PIN-Fotodiode mit erhöhter Blauempfindlichkeit; in SMT Silicon PIN Photodiode with Enhanced Blue Sensitivity; in SMT Lead (Pb) Free Product - RoHS Compliant

BPW 34 B
BPW 34 BS



BPW 34 B



BPW 34 BS

Wesentliche Merkmale

- Speziell geeignet für Anwendungen im Bereich von 350 nm bis 1100 nm
- Kurze Schaltzeit (typ. 25 ns)
- DIL-Plastikbauform mit hoher Packungsdichte

Anwendungen

- Lichtschranken für Gleich- und Wechsellichtbetrieb im sichtbaren Lichtbereich
- Industrieelektronik
- „Messen/Steuern/Regeln“

Features

- Especially suitable for applications from 350 nm to 1100 nm
- Short switching time (typ. 25 ns)
- DIL plastic package with high packing density

Applications

- Photointerrupters
- Industrial electronics
- For control and drive circuits

Typ Type	Bestellnummer Ordering Code
BPW 34 B	Q65110A3126
BPW 34 BS	Q65110A2625

Grenzwerte**Maximum Ratings**

Bezeichnung Parameter	Symbol Symbol	Wert Value	Einheit Unit
Betriebs- und Lagertemperatur Operating and storage temperature range	$T_{op}; T_{stg}$	- 40 ... + 85	°C
Sperrspannung Reverse voltage	V_R	32	V
Verlustleistung, $T_A = 25\text{ °C}$ Total power dissipation	P_{tot}	150	mW

Kennwerte ($T_A = 25\text{ °C}$, Normlicht A, $T = 2856\text{ K}$)**Characteristics** ($T_A = 25\text{ °C}$, standard light A, $T = 2856\text{ K}$)

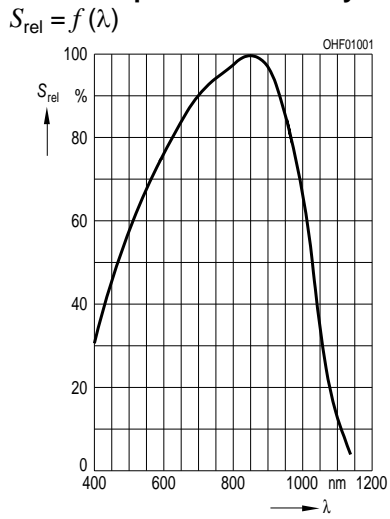
Bezeichnung Parameter	Symbol Symbol	Wert Value	Einheit Unit
Fotoempfindlichkeit, $V_R = 5\text{ V}$ Spectral sensitivity	S	75	nA/lx
Wellenlänge der max. Fotoempfindlichkeit Wavelength of max. sensitivity	$\lambda_{S\text{ max}}$	850	nm
Spektraler Bereich der Fotoempfindlichkeit $S = 10\%$ von S_{max} Spectral range of sensitivity $S = 10\%$ of S_{max}	λ	350 ... 1100	nm
Bestrahlungsempfindliche Fläche Radiant sensitive area	A	7.45	mm ²
Abmessung der bestrahlungsempfindlichen Fläche Dimensions of radiant sensitive area	$L \times B$ $L \times W$	2.73×2.73	mm × mm
Halbwinkel Half angle	φ	± 60	Grad deg.
Dunkelstrom, $V_R = 10\text{ V}$ Dark current	I_R	2 (≤ 30)	nA
Spektrale Fotoempfindlichkeit, $\lambda = 400\text{ nm}$ Spectral sensitivity	S_λ	0.2	A/W
Quantenausbeute, $\lambda = 400\text{ nm}$ Quantum yield	η	0.62	<u>Electrons</u> Photon
Leerlaufspannung, $E_v = 1000\text{ lx}$ Open-circuit voltage	V_O	390	mV

Kennwerte ($T_A = 25\text{ °C}$, Normlicht A, $T = 2856\text{ K}$)

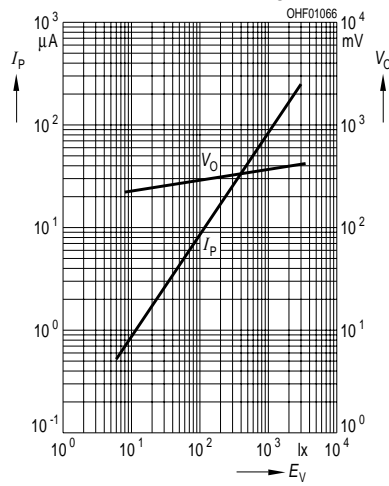
Characteristics ($T_A = 25\text{ °C}$, standard light A, $T = 2856\text{ K}$) (cont'd)

Bezeichnung Parameter	Symbol Symbol	Wert Value	Einheit Unit
Kurzschlussstrom Short-circuit current $E_e = 0.5\text{ mW/cm}^2$, $\lambda = 400\text{ nm}$	I_{SC}	7.4 (≥ 5.4)	μA
Anstiegs- und Abfallzeit des Fotostroms Rise and fall time of the photocurrent $R_L = 50\ \Omega$; $V_R = 5\text{ V}$; $\lambda = 850\text{ nm}$; $I_p = 800\ \mu\text{A}$	t_r, t_f	25	ns
Durchlassspannung, $I_F = 100\text{ mA}$, $E = 0$ Forward voltage	V_F	1.3	V
Kapazität, $V_R = 0\text{ V}$, $f = 1\text{ MHz}$, $E = 0$ Capacitance	C_0	72	pF
Temperaturkoeffizient von V_O Temperature coefficient of V_O	TC_V	- 2.6	mV/K
Temperaturkoeffizient von I_{SC} Temperature coefficient of I_{SC}	TC_I	0.18	%/K
Rauschäquivalente Strahlungsleistung Noise equivalent power $V_R = 10\text{ V}$, $\lambda = 400\text{ nm}$	NEP	1.3×10^{-13}	$\frac{\text{W}}{\sqrt{\text{Hz}}}$
Nachweisgrenze, $V_R = 10\text{ V}$, $\lambda = 400\text{ nm}$ Detection limit	D^*	2.1×10^{12}	$\frac{\text{cm} \times \sqrt{\text{Hz}}}{\text{W}}$

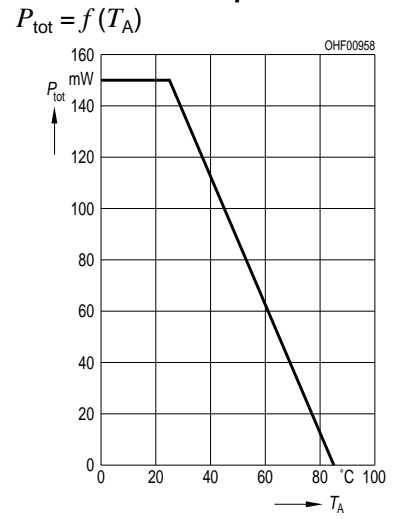
Relative Spectral Sensitivity



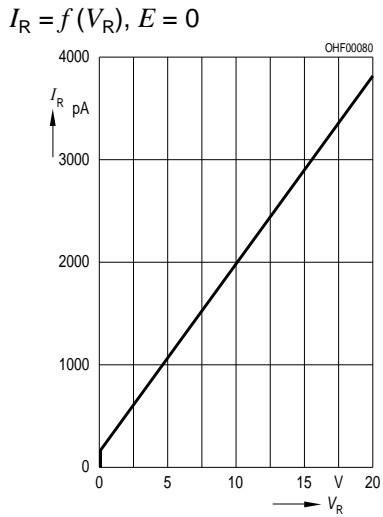
**Photocurrent $I_P = f(E_V)$, $V_R = 5 V$
Open-Circuit Voltage $V_O = f(E_V)$**



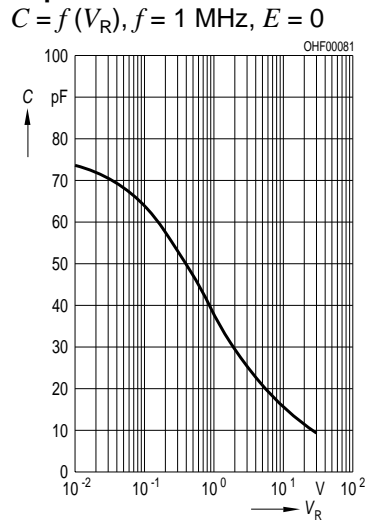
Total Power Dissipation



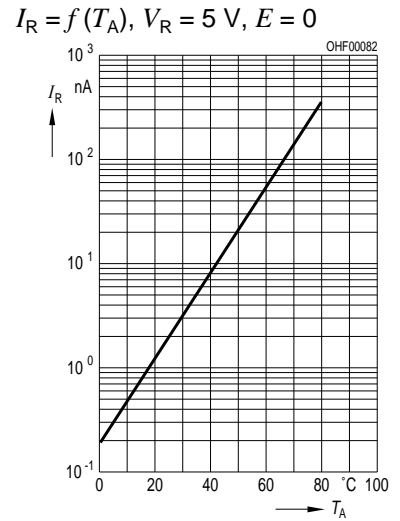
Dark Current



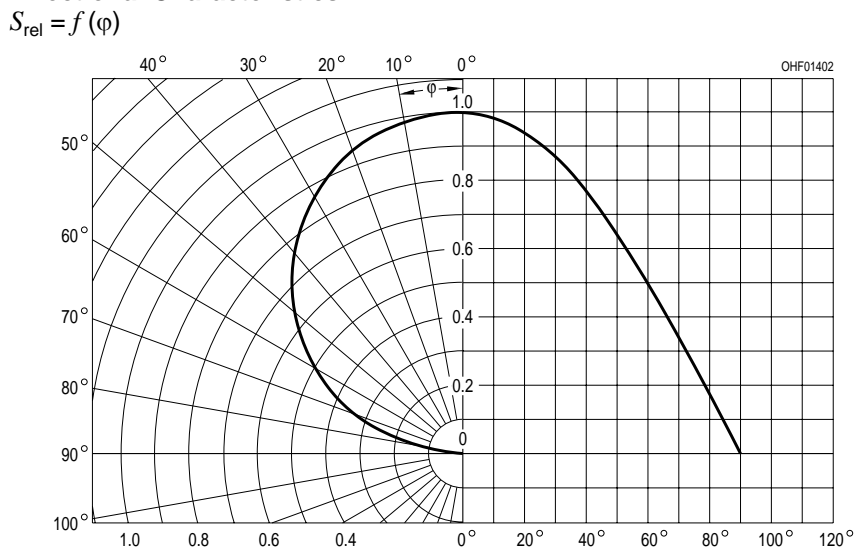
Capacitance



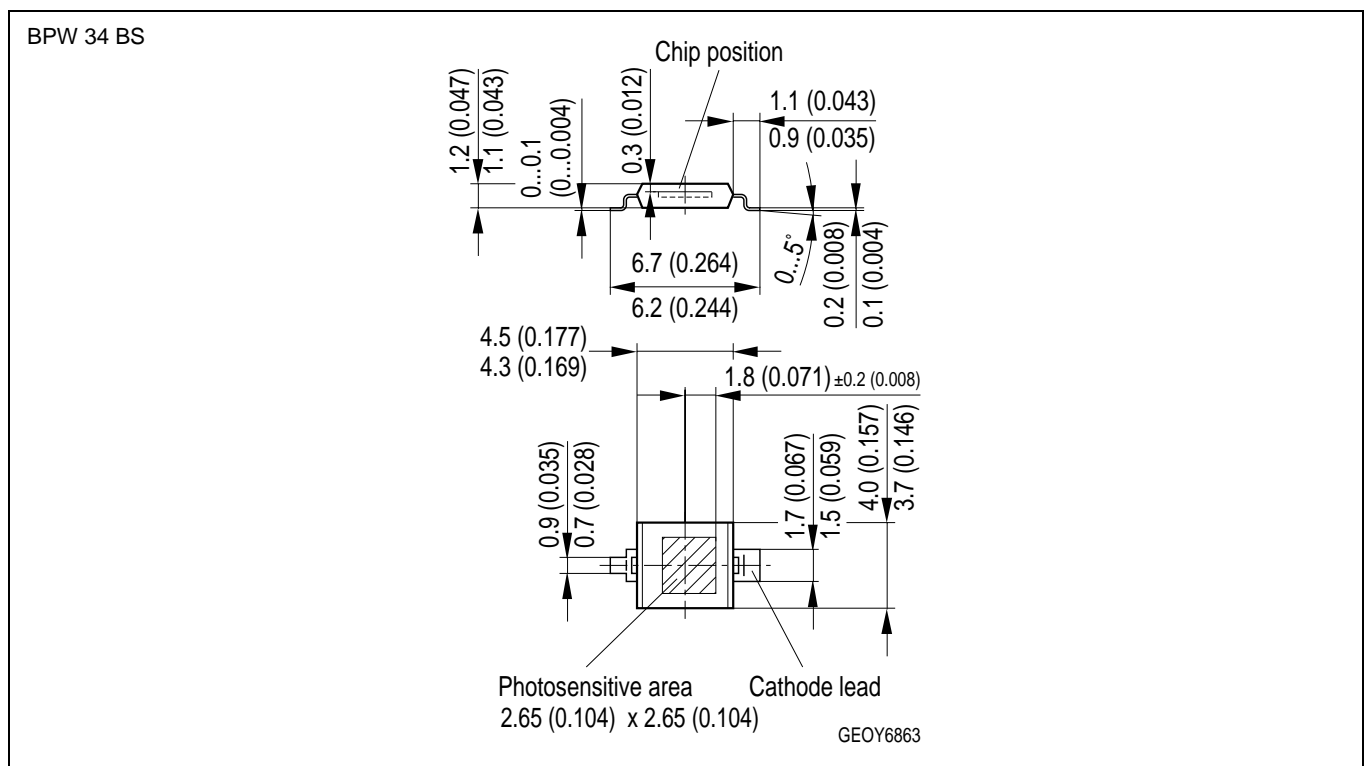
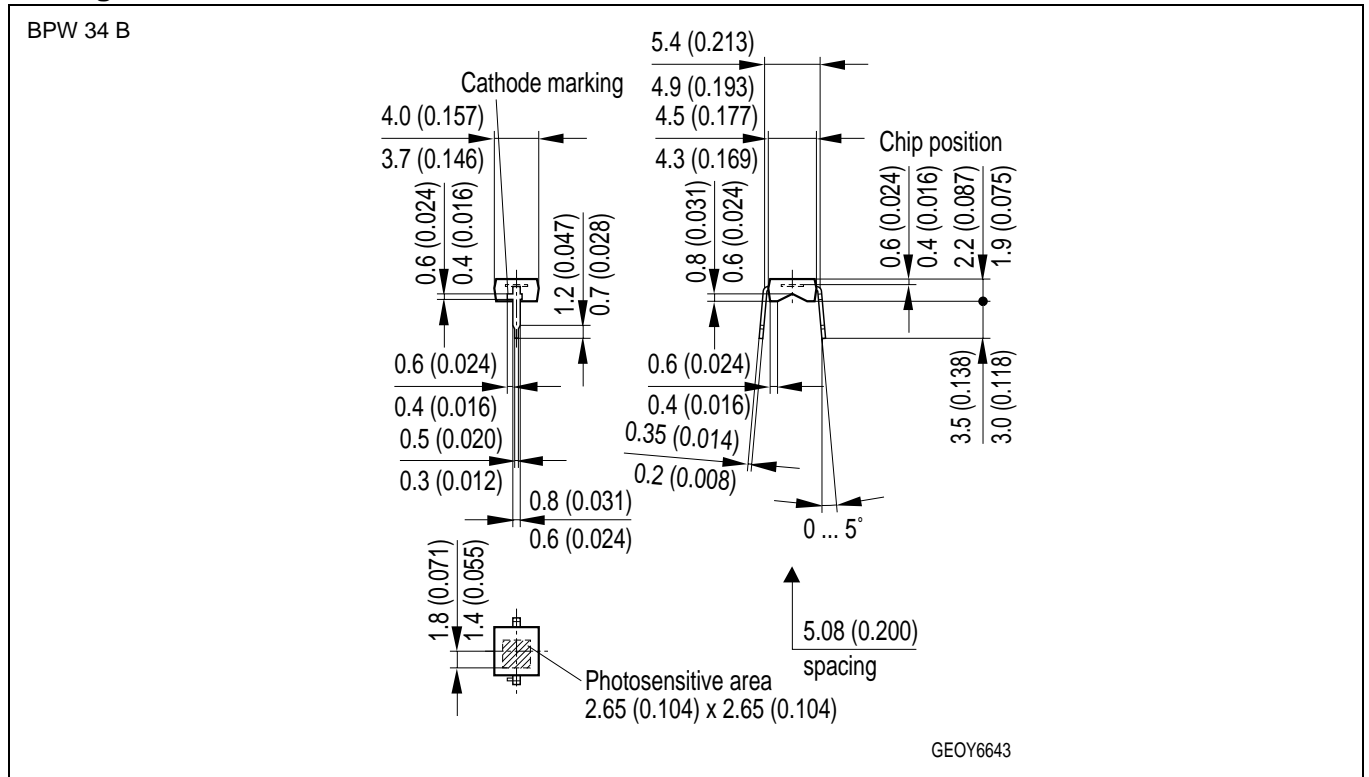
Dark Current



Directional Characteristics



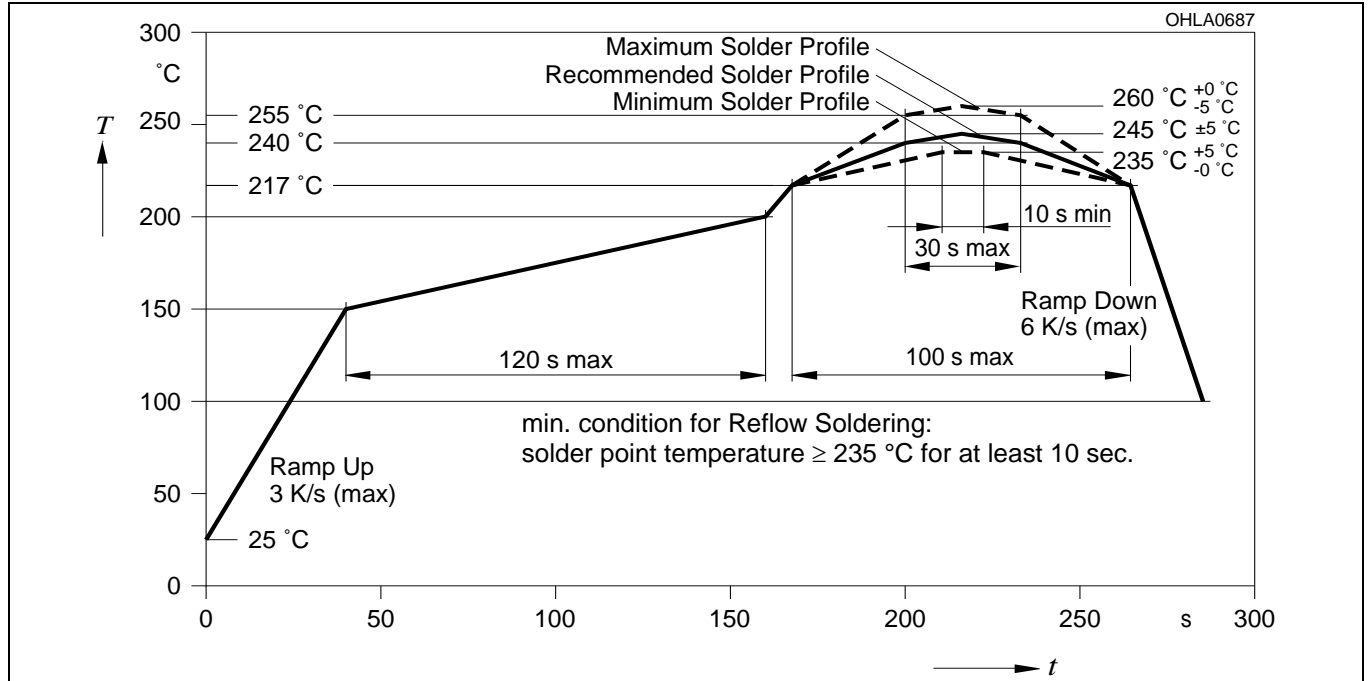
Maßzeichnung
Package Outlines



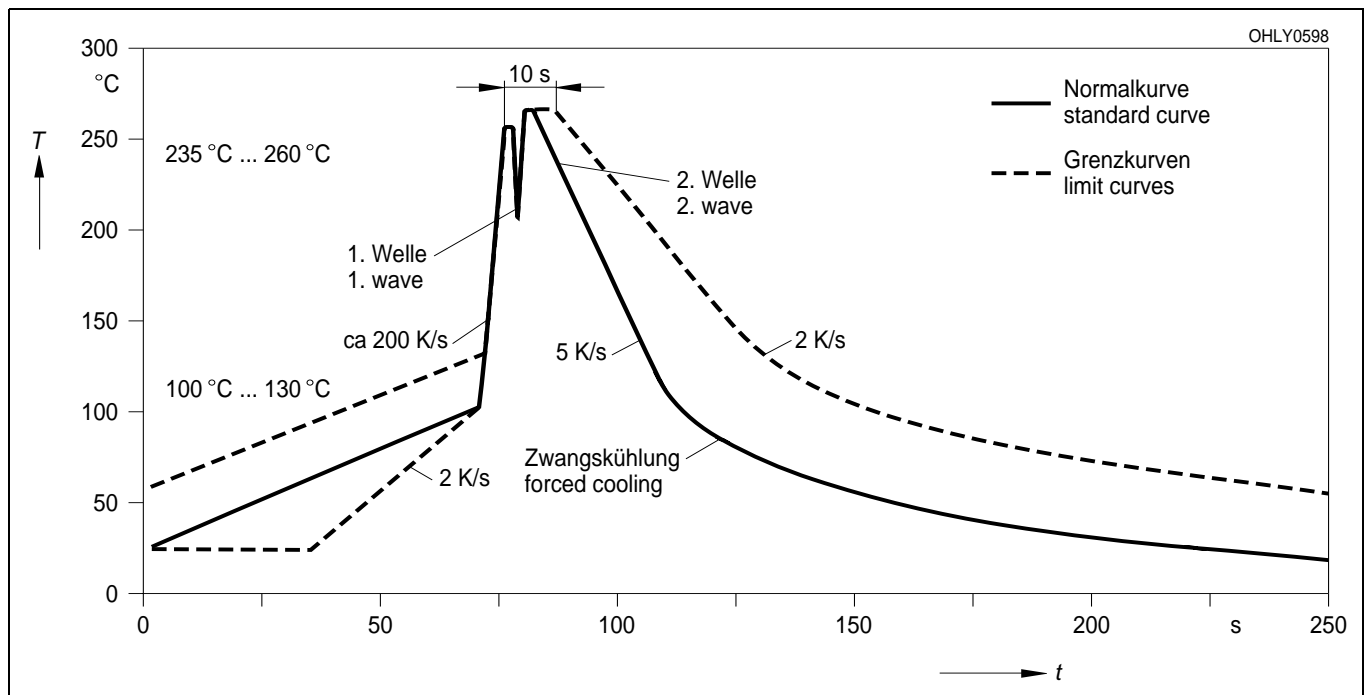
Maße in mm (inch) / Dimensions in mm (inch).

Lötbedingungen **BPW 34 BS**
Soldering Conditions
Reflow Lötprofil für bleifreies Löten
Reflow Soldering Profile for lead free soldering

Vorbehandlung nach JEDEC Level 4
 Preconditioning acc. to JEDEC Level 4
 (nach J-STD-020C)
 (acc. to J-STD-020C)



Wellenlöten (TTW) **BPW 34 B** (nach CECC 00802)
TTW Soldering (acc. to CECC 00802)



Published by
OSRAM Opto Semiconductors GmbH
Wernerwerkstrasse 2, D-93049 Regensburg
www.osram-os.com

© All Rights Reserved.

The information describes the type of component and shall not be considered as assured characteristics. Terms of delivery and rights to change design reserved. Due to technical requirements components may contain dangerous substances. For information on the types in question please contact our Sales Organization.

Packing

Please use the recycling operators known to you. We can also help you – get in touch with your nearest sales office. By agreement we will take packing material back, if it is sorted. You must bear the costs of transport. For packing material that is returned to us unsorted or which we are not obliged to accept, we shall have to invoice you for any costs incurred.

Components used in life-support devices or systems must be expressly authorized for such purpose! Critical components¹, may only be used in life-support devices or systems² with the express written approval of OSRAM OS.

¹ A critical component is a component used in a life-support device or system whose failure can reasonably be expected to cause the failure of that life-support device or system, or to affect its safety or effectiveness of that device or system.

² Life support devices or systems are intended (a) to be implanted in the human body, or (b) to support and/or maintain and sustain human life. If they fail, it is reasonable to assume that the health of the user may be endangered.

EU RoHS and China RoHS compliant product



此产品符合欧盟 RoHS 指令的要求；

按照中国的相关法规和标准，不含有毒有害物质或元素。