



S 243 P
T-41-67

Opto - Hybrid - Detector

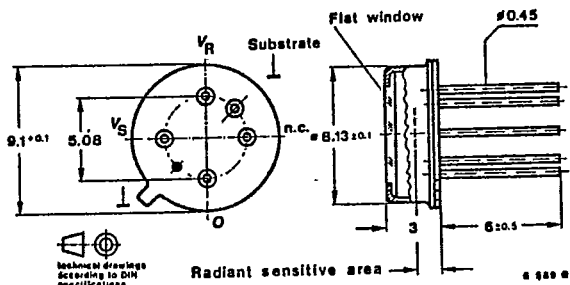
Preliminary specifications

Applications: Transimpedance amplifier, detector for optical communication, e.g. for optical fiber transmission systems

Features:

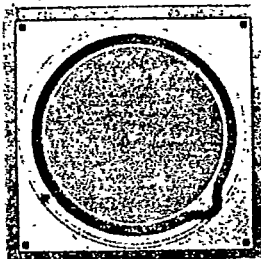
- High bandwidth
- High dynamic range
- Exact central chip alignment typ. $\pm 50 \mu\text{m}$
- Radiant sensitive area $A = 0.78 \text{ mm}^2$

Dimensions in mm



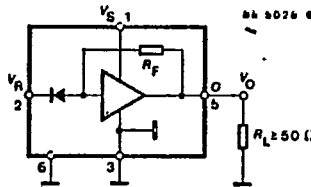
JEDEC TO 56
Weight max. 1.0 g

Chip configuration



1.2 x 1.2 mm
A = 0.78 mm²
ϕ 1 mm

When the glassfiber is placed in mechanical contact with the window and optically adjusted the detector collects radiation from a numerical aperture of 0.4



Pin connections

Absolute maximum ratings

Supply voltage for the amplifier	V_S	15	V
for the photo diode	V_R	60	V
Output current	I_O	20	mA
Total power dissipation $T_{amb} \leq 25 \text{ }^\circ\text{C}$	P_{tot}	500	mW
Junction temperature	T_j	100	$^\circ\text{C}$
Operating temperature range	T_{amb}	-20...+70	$^\circ\text{C}$

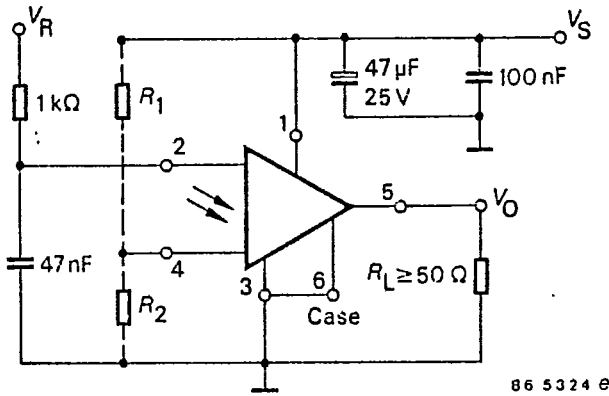
T1.2/1186.0788 E

T-41-67

Optical and electrical characteristics

$V_S = 12\text{ V}$, $V_R = 12\text{ V}$, $R_L = 50\ \Omega$, $T_{\text{amb}} = 25\ \text{°C}$,
unless otherwise specified

	Min.	Typ.	Max.	
Supply voltage for the amplifier	V_S	5	12	V
Supply voltage for the photo diode	V_R	5	24	V
Supply current	I_S	4.5	10	mA
DC output standoff voltage	V_{OB}	0.5	2.0	V
Peak wavelength sensitivity	λ_p		930	nm
Range of spectral bandwidth	$\lambda_{0.5}$		630...1050	nm
Sensitivity $\lambda_p = 850\text{ nm}$	s	70	90	mV/ μW
Bandwidth (-3 dB) $\lambda_p = 950\text{ nm}$	B	2	5	MHz
Output noise voltage $B = 5\text{ MHz}$	v_{no}		80	μV_{RMS}



Test and application circuit

T-41-67

