



**TELEFUNKEN electronic**  
Creative Technologies

**BPW 35**

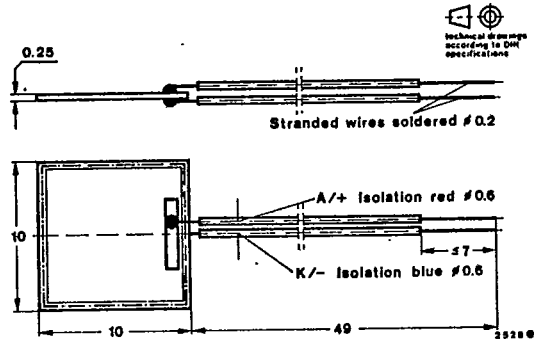
**Silicon PN Planar Photodiode**

**Applications:** Sensor for light measuring purposes

**Features:**

- Large radiant sensitive area
- High blue sensitivity up to the UV-range
- Suitable for visible and near infrared radiation.
- No light memory effect
- Low temperature coefficient
- High stability and high reliability
- No change by irradiation even in UV-Range

**Dimensions in mm**



Radiant sensitive area  $A = 94 \text{ mm}^2$   
 Angle of half sensitivity  $\pm \varphi = 60^\circ$   
 Without case  
 Weight max. 0.2 g

**Absolute maximum ratings**

Reverse voltage	$V_R$	1	V
Ambient temperature range	$T_{amb}$	-40...+100	°C
Storage temperature range	$T_{stg}$	-40...+100	°C

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## Optical and electrical characteristics

Min. Typ. Max.

 $T_{amb} = 25\text{ }^{\circ}\text{C}$ 

## Open circuit voltage

 $E_A = 1\text{ klx}^{1)}$  $V_o^{1)}$ 

300

380

mV

Temperature coefficient of  $V_o$  $TK_{V_o}$ 

-2

mV/K

## Short circuit current

 $E_A = 1\text{ klx}^{1)}, R_L = 100\text{ }\Omega$  $I_k^{1)}$ 

240

300

 $\mu\text{A}$  $E_C = 1\text{ klx}^{2)}, R_L = 100\text{ }\Omega$  $I_k^{2)}$ 

200

220

 $\mu\text{A}$  $E_A = 1\text{ klx}^{3)}, R_L = 10\text{ k}\Omega, \lambda_p = 425\text{ nm}$  $I_k$ 

0.8

1.6

 $\mu\text{A}$ 

## Sensitivity, short circuit

 $E_A = 1\text{ klx}^{1)}$  $S_k$ 

240

300

nA/lx

Temperature coefficient of  $I_k$  $TK_{I_k}$ 

0.1

%/K

## Peak wavelength sensitivity

 $\lambda_p$ 

750

nm

## Range of spectral bandwidth (50%)

 $\lambda_{0.5}$ 

450...950

nm

## Reverse dark current

 $V_R = 50\text{ mV}, E = 0$  $I_{ro}$ 

10

100

nA

 $V_R = 1\text{ V}, E = 0$  $I_{ro}$ 

250

nA

## Internal resistance

 $V_R = 50\text{ mV}, E = 0$  $R_i$ 

0.5

5

M $\Omega$ 

## Junction capacitance

 $V_R = 1\text{ V}, f = 100\text{ kHz}, E = 0$  $C_j$ 

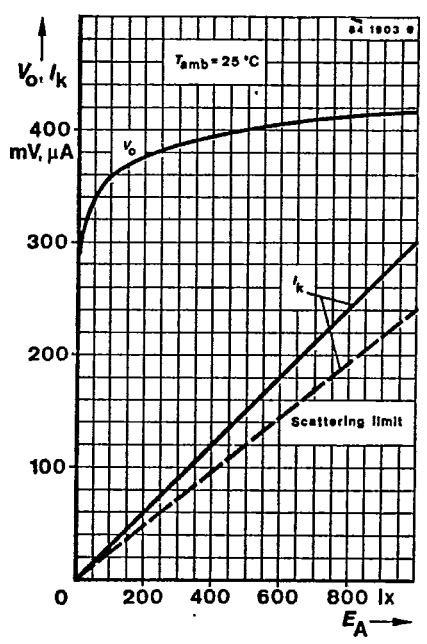
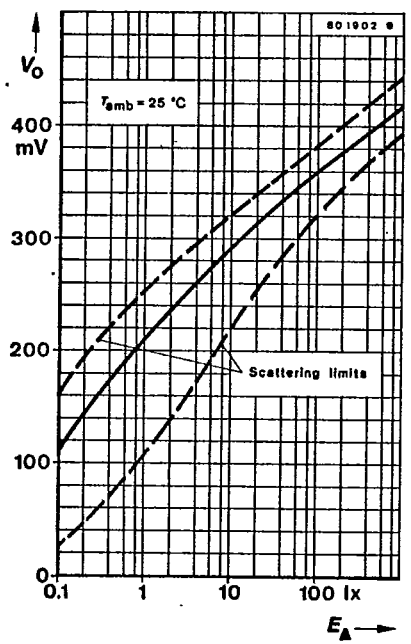
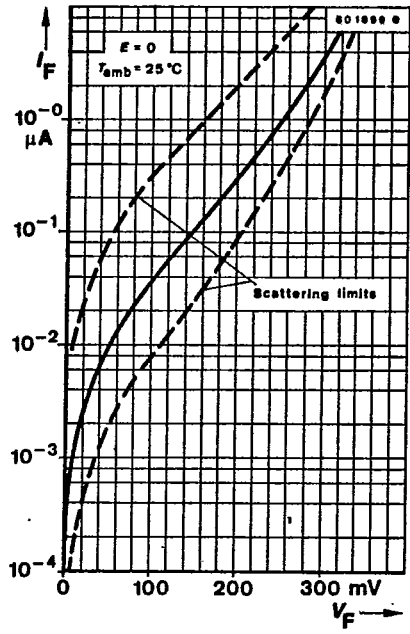
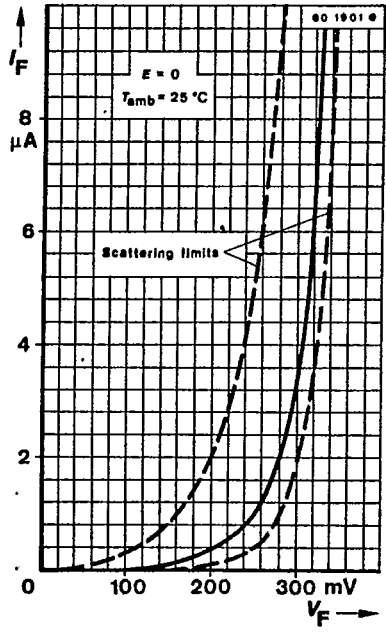
10

nF

<sup>1)</sup> AQL = 0.65 % <sup>1)</sup> Standard illuminant A (DIN 5033/IEC 306-1,  $T_f = 2855.6\text{ K}$ )<sup>2)</sup> Standard illuminant C ( $T_f = 4700\text{ K}$ )<sup>3)</sup> With blue filter combination: Schott BG 32 (2 mm) + Kodak Wratten No. 47 B

T-41-51

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