

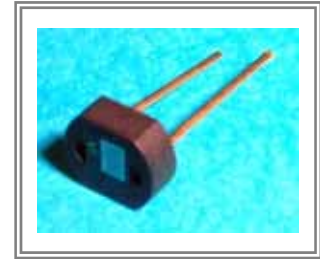
## Silicon Photo Diodes

### Model No. SD-21AF

Optoelectronic device

#### ◆ Features

- Sensitive to visible light only:  $\lambda_p=570\text{nm}$
- Small dark current
- Small junction capacitance & Quick response
- High reliability



#### ◆ Absolute Maximum Ratings

$T_a = 25^\circ\text{C}$

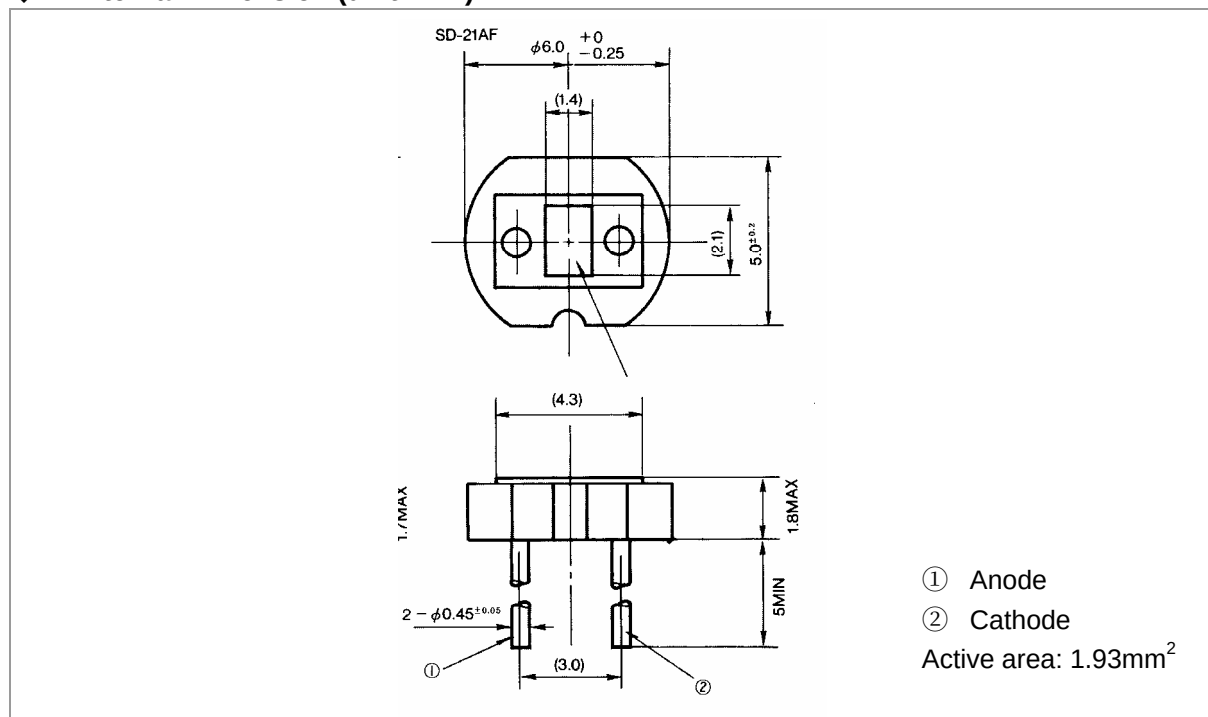
| Parameter             | Symbol    | Value     | Unit             |
|-----------------------|-----------|-----------|------------------|
| DC Reverse Voltage    | $V_R$     | 20        | V                |
| Operating Temperature | $T_{opr}$ | -20 ~ +60 | $^\circ\text{C}$ |
| Storage Temperature   | $T_{stg}$ | -25 ~ +80 | $^\circ\text{C}$ |

#### ◆ Electro-optical Characteristics

$T_a = 25^\circ\text{C}$

| Parameter                              | Symbol       | MIN  | TYP  | MAX  | Unit                      | Condition                                 |
|----------------------------------------|--------------|------|------|------|---------------------------|-------------------------------------------|
| Sensitive Range                        | $\lambda$    | 350  |      | 750  | nm                        | Equivalent energy                         |
| Peak sensitive wavelength              | $\lambda_p$  | 540  | 560  | 580  | nm                        | Equivalent energy                         |
| Short Circuit Current                  | $I_{sc}$     | 0.13 | 0.18 | 0.21 | $\mu\text{A}$             | 100Lx                                     |
| Dark current                           | $I_d$        |      |      | 8    | pA                        | $V_R=1\text{V}$ , $RH \leq 65\%$          |
| Shortcircuit current temp. coefficient | $\beta_T$    |      | 0.02 | 0.07 | $\%/^\circ\text{C}$       | 100Lx                                     |
| Dark current temp. coefficient         | $\alpha_T$   |      | 4    | 5    | Times/ $10^\circ\text{C}$ | $V_R=1\text{V}$ , $RH \leq 65\%$          |
| Terminal capacitance                   | $C_T$        |      | 250  | 300  | pF                        | $V_R=0\text{V}$ , $f=1\text{MHz}$         |
| Spectral sensitivity                   | $\Delta I_R$ |      | 6    | 10   | %                         | $\lambda = 700\text{nm}$ , $I_{sc}$ ratio |

#### ◆ External Dimension (unit: mm)



Package

Ceramic