

## Optoelectronic Devices

| Order code | Manufacturer code | Description                  |
|------------|-------------------|------------------------------|
| 58-0115    | n/a               | BPW41N INFRA RED SENSOR (RC) |

|                                                                                                                                                                                                  |                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| Optoelectronic Devices                                                                                                                                                                           | Page 1 of 2              |
| The enclosed information is believed to be correct, Information may change without notice due to product improvement. Users should ensure that the product is suitable for their use. E. & O. E. | Revision A<br>20/02/2007 |

# BPW SERIES

## SILICON PIN PHOTO DIODES

A range of PIN photodiodes encapsulated in economical plastic packages which are clear or incorporate a daylight filter which provides sensitivity to infra-red radiation only, with high rejection of wavelengths less than 700nm. The devices have low junction capacitance and thus are capable of fast switching speeds.

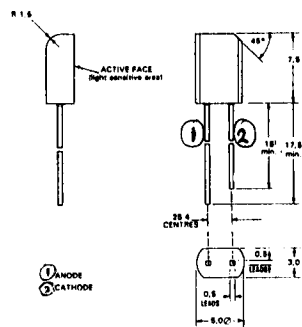
## SUITABLE APPLICATIONS

Filtered options — IR remote-control for television, hi-fi systems, slide projectors, model cars, trains, etc., garage door, domestic appliances, automobile security. Perfectly matched to GaAs IRED emission.

Clear options — General purpose light sensing, street lighting.

## INFRA-RED PIN DIODE PHOTO DETECTORS

| Device Type | Photo Sensitive Area<br>mm <sup>2</sup> | Package Ref. | CHARACTERISTICS at 25°C |                                                                                                                      |     |                                                        |    |                                           |                                  |                                                                               |                                                                                         |
|-------------|-----------------------------------------|--------------|-------------------------|----------------------------------------------------------------------------------------------------------------------|-----|--------------------------------------------------------|----|-------------------------------------------|----------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
|             |                                         |              | Ø                       | I <sub>L</sub> and V <sub>OC</sub><br>E <sub>0</sub> = 1mW/cm <sup>2</sup><br>λ = 950nm<br>V <sub>R</sub> = 5V<br>μA |     | I <sub>R</sub> at V <sub>R</sub><br>E <sub>0</sub> = 0 |    | V <sub>BR</sub><br>I <sub>R</sub> = 100μA | λ <sub>p</sub> /λ <sub>0.5</sub> | C <sub>i</sub><br>V <sub>R</sub> = 3V<br>f = 1MHz<br>E <sub>0</sub> = 0<br>pF | t <sub>on</sub> /t <sub>off</sub><br>V <sub>R</sub> = 10V<br>R <sub>L</sub> = 1kΩ<br>nS |
|             |                                         |              |                         | mV                                                                                                                   | nA  | V                                                      | V  | nm                                        |                                  |                                                                               |                                                                                         |
| BPW41       | 7.25                                    | Fig. 7       | ± 65°                   | ( > 25 ) 45                                                                                                          | 350 | 2 ( < 30 )                                             | 10 | > 32                                      | 925/<br>820 to 1040              | 25 ( < 40 )                                                                   | 50                                                                                      |



BPW41