

# MAZDA

## PE50

### PHOTO ELECTRIC CELL

PE50

#### GENERAL

The Mazda PE50 is a Miniature Gas-Filled Photo Electric Cell with a Caesium-Oxygen-Silver cathode surface, having maximum sensitivity in the red and infra-red region of the spectrum. The bulb is blackened except for a window 21 x 11.6 mm opposite the cathode.

#### RATING

Approximate Overall Sensitivity (average) ( $\mu\text{A}/\text{lumen}$ )	120	♠
Approximate Primary Sensitivity (average) ( $\mu\text{A}/\text{lumen}$ )	20	‡
Maximum Gas Amplification Factor	10	⊙
Maximum Working Voltage (volts)	90	
Maximum Average Cathode Current ( $\mu\text{A}$ )	2.5	§
Maximum Peak Cathode Current ( $\mu\text{A}$ )	8.0	
Maximum Peak Cathode Current Density ( $\mu\text{A}/\text{sq cm}$ )	15	
Maximum Dark Current ( $\mu\text{A}$ )	0.1	x
Minimum Insulation resistance between electrodes (M $\Omega$ )	1,000	

#### NOTES

- ♠ Measured at 0.02 lumens with lamp colour temperature 2700°K and a cell series resistance of 1.0 M $\Omega$ . Anode Voltage = 90 volts.
- ⊙ Gas Amplification Factor is the ratio of current at 90 volts to current at 25 volts under the conditions mentioned above.
- x Measured at 90 volts with 1.0 M $\Omega$ . series resistance, zero illumination.
- ‡ The Primary sensitivity is measured at an anode voltage of 25 volts at which ionisation has not taken place.
- § Average over a period not greater than 30 secs.

All Maximum Ratings are Absolute values not Design Centres.

#### INTER-ELECTRODE CAPACITANCE

Anode to Cathode ( $\mu\text{F}$ ) 3.0

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#### DIMENSIONS

Max. Overall Length (mm)	69.0
Max. Seated Height (mm)	60.5
Light Centre from Seat (mm) (nominal)	42.5
Max. Bulb Diameter (mm)	16.25
Max. Base Diameter (mm)	16.15
Cathode Length (mm) (nominal)	21.0
Effective Cathode Width (mm)	11.6
Window Area (sq. cm.)	2.4
Projected Cathode Area (sq. cm.)	2.4
Approximate Nett Weight (oz)	1
Approximate Packed Weight (oz)	4 $\frac{1}{2}$

MOUNTING POSITION Unrestricted.

BASE Miniature 4. Pin (B4B)

#### CONNECTIONS

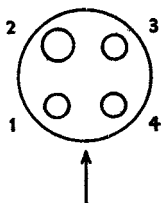
Pin No. 1. Anode

2. -

3. Cathode

4. -

Viewed from free end of pins



Direction of Light.