




## Features

- Compact size: 6 mm diameter, 8 mm length
- Low capacitance and insertion loss
- Switch-Grade Fail-Short option available
- RoHS compliant\*
-  UL Recognized

## Applications

- Telecommunications equipment
- Industrial equipment/electronics
- Consumer electronics

# 2056 Series Light Duty 3-Electrode Gas Discharge Tube

## Characteristics

Test Methods per ITU-T K.12 and IEC 61643-311.

| Characteristic                    | Model No. |         |         |         |         |
|-----------------------------------|-----------|---------|---------|---------|---------|
|                                   | 2056-09   | 2056-14 | 2056-20 | 2056-23 | 2056-25 |
| DC Sparkover $\pm 20\%$ @ 100 V/s | 90 V      | 145 V   | 200 V   | 230 V   | 250 V   |
| Impulse Sparkover <sup>(1)</sup>  |           |         |         |         |         |
| 100 V/ $\mu$ s                    | < 750 V   | < 750 V | < 600 V | < 600 V | < 600 V |
| 1000 V/ $\mu$ s                   | < 850 V   | < 850 V | < 700 V | < 700 V | < 700 V |

| Characteristic                    | Model No. |         |         |         |          |
|-----------------------------------|-----------|---------|---------|---------|----------|
|                                   | 2056-35   | 2056-40 | 2056-42 | 2056-47 | 2056-60  |
| DC Sparkover $\pm 20\%$ @ 100 V/s | 350 V     | 400 V   | 420 V   | 470 V   | 600 V    |
| Impulse Sparkover <sup>(1)</sup>  |           |         |         |         |          |
| 100 V/ $\mu$ s                    | < 650 V   | < 700 V | < 700 V | < 800 V | < 900 V  |
| 1000 V/ $\mu$ s                   | < 750 V   | < 800 V | < 800 V | < 900 V | < 1000 V |

<sup>(1)</sup> Impulse Sparkover voltage is defined as typical values of distribution.

|   |                             |                |
|---|-----------------------------|----------------|
| Insulation Resistance (IR) <sup>(2)</sup> ..... | 50 / 100 / 250 Vdc .....    | > 1 G $\Omega$ |
| Glow Voltage .....                              | 10 mA .....                 | ~ 70 V         |
| Arc Voltage .....                               | 1 A .....                   | ~ 10 V         |
| Glow-Arc Transition Current .....               | .....                       | < 1 A          |
| Maximum Capacitance .....                       | 1 MHz .....                 | < 2 pF         |
| Maximum Impulse Discharge Current .....         | 5,000 A, 8/20 $\mu$ s ..... | 10 operations  |
| Nominal Alternating Discharge Current .....     | 5 A, 50 Hz, 1 second .....  | 1 operation    |
| Impulse Life .....                              | 200 A 10/1000 $\mu$ s ..... | 100 operations |
| DC Holdover Voltage <sup>(3)</sup> .....        | .....                       | < 150 ms       |
| Operating Temperature .....                     | .....                       | -30 to +85 °C  |
| Storage Temperature .....                       | .....                       | -40 to +115 °C |
| Climatic Category (IEC 60068-1) .....           | .....                       | 40 / 90 / 21   |

### Notes:

- UL Recognized component, UL File E153537.
- At delivery AQL 0.65, level II DIN ISO 2859
- Line to Line voltage is approximately 1.8 to 2 times the stated Line to Ground voltage.
- Discharge current rating is total current equally divided between Each Line To Ground (ELTG).

|                                     |                      |
|-------------------------------------|----------------------|
| <sup>(2)</sup> DC Sparkover Voltage | IR Measuring Voltage |
| 90 V                                | 50 V                 |
| 145–400 V                           | 100 V                |
| 420–600 V                           | 250 V                |

|                                |                     |
|--------------------------------|---------------------|
| <sup>(3)</sup> Network Applied |                     |
| DC Sparkover Voltage           | DC Holdover Voltage |
| 90–145 V                       | 52 V                |
| 200–250 V                      | 135 V               |
| 350–600 V                      | 150 V               |



**WARNING Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

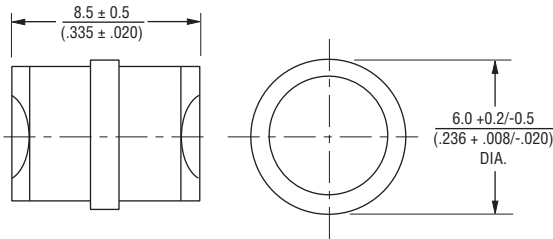
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# 2056 Series Light Duty 3-Electrode Gas Discharge Tube

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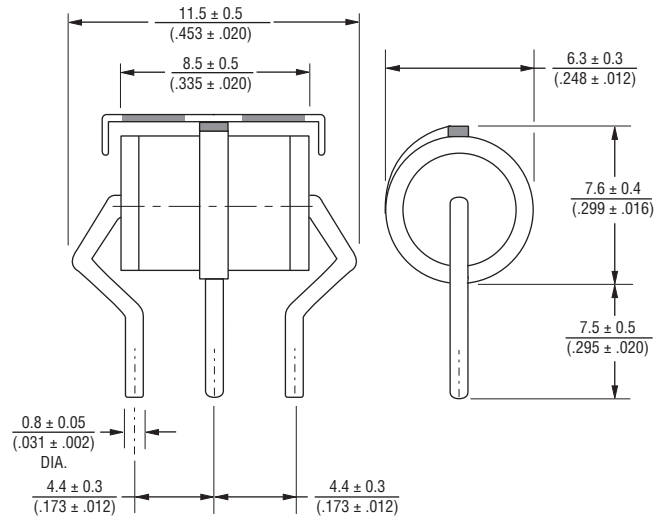
## Product Dimensions

### 2056-xx-A



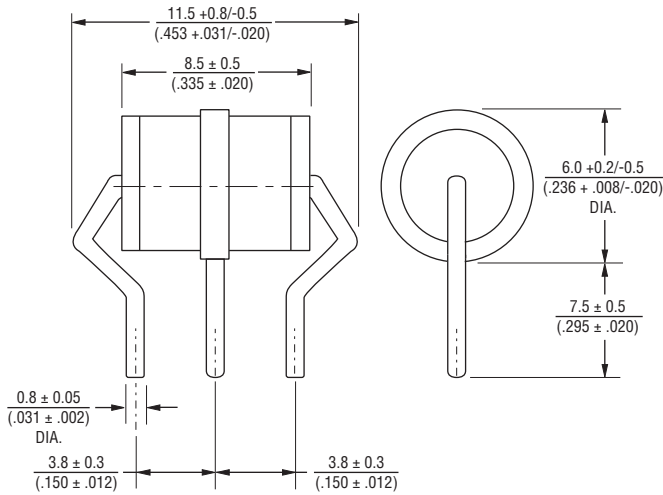
### 2056-xx-B2

0.8 mm dia., 4.4 mm spacing  
(B2FLF Switch-Grade Fail-Short Configuration Shown)



### 2056-xx-B3

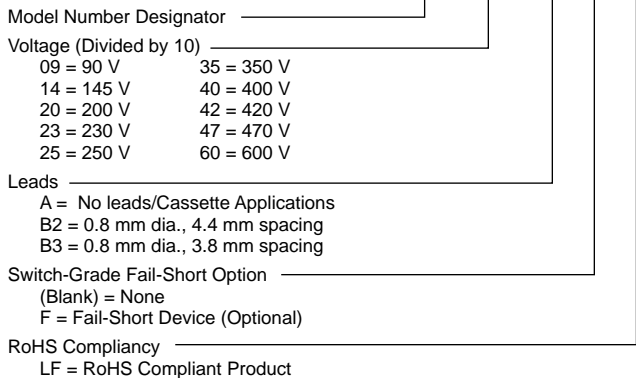
0.8 mm dia., 3.8 mm spacing



DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

## How to Order

2056 - xx - xx (F) LF



## Packaging Specifications

Model 2056 ships standard bulk pack, 100 pieces per tray; 5 trays per box, 2 boxes per outer pack (1K units).

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