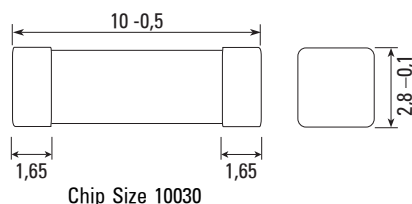
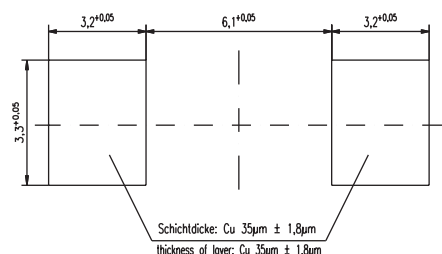


**No. 457 Lead Free**

This product is not recommended for new designs. Please refer to Littelfuse No. 461.

**Dimensions (mm)****Pad Layout****Operating Conditions**

| Type (I)          | 100% x I | 250% x I    |
|-------------------|----------|-------------|
| 500 mA ... 2.00 A | > 4 h    | 1 ... 120 s |



**AC Power Fault Ratings • Permissible continuous operating current is ≤ 80 % at ambient temperature of 23 °C (73.4 °F)**

| UL 60950 3rd Edition * |                      |                    |                       |                         | Telcordia 1089 (2nd Level) * |                   |                   |                      |
|------------------------|----------------------|--------------------|-----------------------|-------------------------|------------------------------|-------------------|-------------------|----------------------|
| Type Code              | Test M1<br>600V/1.5s | Test M2<br>600V/5s | Test M3<br>600V/30min | Test M3<br>Max. ΔT (°C) | Test 1<br>277V/15min         | Test 2<br>600V/5s | Test 3<br>600V/5s | Test 4<br>600V/15min |
| 0500                   | 40A                  | 7A                 | 2.2A                  | —                       | 25A                          | 60A               | 7A                | 2.2A                 |
| 1250                   | 40A                  | 7A                 | 2.2A                  | 120                     | 25A                          | 60A               | 7A                | 2.2A                 |
| 1251                   | 40A                  | 7A                 | 2.2A                  | 50                      | 25A                          | 60A               | 7A                | 2.2A                 |

**Lightning Surge Specifications**

| Surge Specification         | Surge                 | Repetitions | Waveform (µsec.) | Current (A) | Voltage (V) | Performance Requirement |
|-----------------------------|-----------------------|-------------|------------------|-------------|-------------|-------------------------|
| <b>0500 tested</b>          |                       |             |                  |             |             |                         |
| FCC 47 Part 68              | Longitudinal Type A   | 2           | 10x160           | 70A         | 1500        | Fuse cannot open        |
| FCC 47 Part 68              | Metallic Type A       | 2           | 10x560           | 45A         | 800         | Fuse cannot open        |
| Telcordia GR-1089-CORE      | First Level Lightning | 50          | 10x1000          | 30A         | 1000        | Fuse cannot open        |
| <b>1250 and 1251 tested</b> |                       |             |                  |             |             |                         |
| FCC 47 Part 68              | Longitudinal Type A   | 2           | 10x160           | 160         | 1500        | Fuse cannot open        |
| FCC 47 Part 68              | Metallic Type A       | 2           | 10x560           | 115         | 800         | Fuse cannot open        |
| Telcordia GR-1089-CORE      | First Level Lightning | 50          | 10x1000          | 100         | 1,000       | Fuse cannot open        |
| Telcordia GR-1089-CORE      | First Level Lighting  | 50          | 2x10             | 500         | 2,500       | Fuse cannot open        |

**Electrical Specifications**

| Type Code | Current | Voltage Rating<br>AC | Interrupting Rating<br>250VAC<br>50/60 Hz | Rating<br>600VAC<br>cosφ=1 | Voltage Drop<br>1.0 x I <sub>N</sub> (W)<br>max. (mV) | Cold Resistance<br>0.1 x I <sub>N</sub> (W)<br>max. (mΩ) | Melting Integral<br>10 x I <sub>N</sub> (W)<br>typ. (A <sup>2</sup> s) | Approvals<br>cULus |
|-----------|---------|----------------------|-------------------------------------------|----------------------------|-------------------------------------------------------|----------------------------------------------------------|------------------------------------------------------------------------|--------------------|
| 0500      | 500mA   | 250V                 | 50A                                       | 60A                        | 450                                                   | 640                                                      | 2                                                                      | •                  |
| 1250      | 1.25A   | 250V                 | 50A                                       | 60A                        | 250                                                   | 150                                                      | 16                                                                     | •                  |
| 1251      | 2.00A   | 250V                 | 50A                                       | 60A                        | 375                                                   | 115                                                      | 18                                                                     | •                  |

\* UL60950 3rd edition and Telcordia 1089 (2nd Level) are device standards, which require a testing of the complete device.

**Order Information**

| Qty. | Order-<br>Number | Series | Type Code | Packaging |
|------|------------------|--------|-----------|-----------|
|      |                  | 457    |           |           |

Specifications are subject to change without notice

**Telecom Tube Protector**

**Overcurrent Protection for Telecom Equipment**

**Time-Current Characteristic**

Transient Tolerant

**Applicable Standards**

UL-248-14  
UL 60950 3rd Edition \*  
Telcordia GR-1089 \*  
FCC 47 CFR Part 68

**Approvals**

cULus Recognized

**Features**

Surge proof for telecom line applications  
No need for series resistors (1.25A & 2.00A)  
Reduced PCB space requirements  
Lead-free construction  
Flame resistant ceramic housing  
Irreversible physical separation under fault  
Highly defined cut-off times  
Low internal resistance minimizes line losses  
For Reflow Soldering or Soldering Iron

**WebLinks****Further info see:**

[www.wickmanngroup.com](http://www.wickmanngroup.com)

**Further application info see fuseology:**

[www.wickmanngroup.com/download/fuseology.pdf](http://www.wickmanngroup.com/download/fuseology.pdf)

**Specifications****Packaging**

000: 2500 pcs./330mm reel (Blister Tape)  
001: 500 pcs./178mm reel (Blister Tape)  
Tape width 16mm

**Materials**

Housing: Ceramic tube  
Element: Wire  
Terminals: Copper, nickel & silver plated

**Operating Temperature**

-40 °C to +125 °C (consider de-rating)

**Climatic Test**

Damp heat, steady state  
40 °C/ 93%/ 21 days (IEC 60068-1,-2-1,-2-2,-2-78)

**Stock Conditions**

+10 °C to +60 °C  
relative humidity ≤ 75 % yearly average,  
without dew, maximum value for 30 days - 95 %

**Recommended soldering**

240 °C, 30 s (Reflow)

**Solderability**

acc. to IEC 60068-2-58  
235 °C, 2 s

**Soldering Heat Resistance**

260 °C, 10 s (IEC 60068-2-58)  
280 °C, 5 s (IEC 60068-2-58)

**Minimum Cross Section, Copper**

Conducting path - 0.175 mm<sup>2</sup>  
Path thickness - 0.035 mm

**Mounting**

Avoid circuit traces below the Fuse.  
Fuse should not be enclosed in potting materials.

**Marking**

Logo, Current Rating

**Unit Weight**

0.25 g (approx.)

TTP / No. 457

