

## Gas Discharge Tubes (GDT)

## RLF-2006 Series

### Description

The Gas Discharge Tube (GDT) is a protective device which is filled with certain proportion of noble gas, or mixed gas or other discharge media in the space between metal electrodes and metalized ceramics, and then sealed at high temperature to form a single gap or multi-gap switch type protective device. When the protected circuit or equipment suffers to surge, GDT will change from high impedance state to low impedance state and release the surge energy to reduce the residual voltage of the circuit, and then protect the equipment or human body from the hazard of transient overvoltage.



### Agency Approvals

Agency	Standards	Certificate No.
	UL1449	E479668

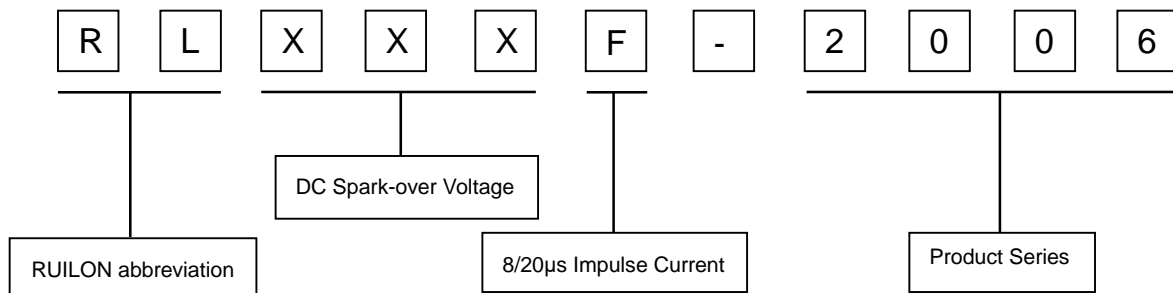
### Features

- I Stable performance over life
- I Very fast response time
- I High insulation resistance
- I Non-Radioactive

### Applications

- I LED lighting
- I Power supply
- I Photovoltaic


### Part Number Code



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### Electrical Characteristics

Model		RL600F-2006	RL800F-2006	Units
<b>DC Spark-over Voltage</b> <sup>1) 2)</sup>	at 100V/S	480~720	640~960	V
<b>Impulse Spark-over Voltage</b>	at 1KV/ $\mu$ S	<1200	<1600	V
<b>Front of wave spark-over voltage</b>	at 1.2/50 $\mu$ s, 6 kV	<1500	<1800	V
<b>Life Ratings</b>				
Nominal discharge current	8/20 $\mu$ S      15 times	80	80	KA
Maximum discharge current	8/20 $\mu$ S      2 times	100	100	KA
Impulse Current	10/350 $\mu$ s      5 times	15	15	KA
<b>Insulation Resistance</b>	at DC 100V	>1	>1	G $\Omega$
<b>Capacitance</b>	at 1MHz	<6.0	<6.0	pF
<b>Glow Voltage</b>	at 10mA	135	135	V
<b>Arc Voltage</b>	at 1A	~18	~18	V
<b>Glow to Arc transition current</b>		~1	~1	A
<b>Weight</b>		~5.85	~5.85	g
<b>Operation and storage temperature</b>		-40~+125	-40~+125	$^{\circ}$ C
<b>Climatic category (IEC60068-1)</b>		40/125/21	40/125/21	
<b>Agency Approvals</b> UL1449 (E479668)		⊙	⊙	
<b>Marking, blue positive</b>		<b>RUILON 2R600-20</b>	<b>RUILON 2R800-20</b>	
<b>Surface treatment</b>		Matte-tin plated		

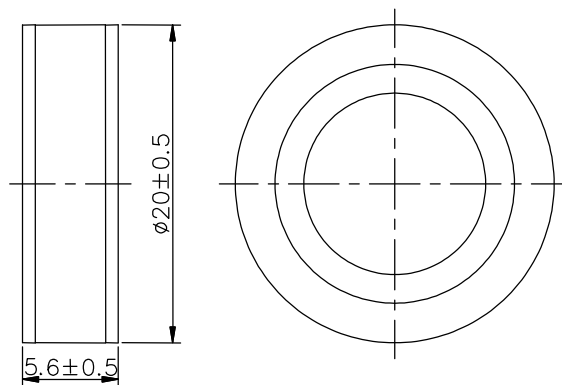
<sup>1)</sup> At delivery AQL 0.65 level II, DIN ISO 2859.

<sup>2)</sup> In ionized mode.

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#### Dimensions (Unit: mm)



#### Packaging Information

	PVC tray	Inner Box	Carton
Size	265×148×11mm	275×150×50mm	315×290×272mm
Quantity	MPQ: 1 tray=21pcs	MOQ: 1 Inner Box=5 trays=105pcs	1 Carton=10 Inner boxes=1,050pcs
Photos			

### Terms and definitions

NO.	Item	Definitions
1	<b>Gas discharge tube(GDT)</b>	A gap, or several gaps, in an enclosed discharge medium, other than air at atmospheric pressure, designed to protect apparatus or personnel, or both, from high transient voltages. Also referred to as "gas tube surge arrester".
2	<b>DC Spark-over Voltage</b>	The voltage at which the gas discharge tube sparks over with slowly increasing d.c. voltage.
3	<b>Impulse Spark-over Voltage</b>	The highest voltage which appears across the terminals of a gas discharge tube in the period between the application of an impulse of given wave-shape and the time when current begins to flow.
5	<b>Arc voltage</b>	Voltage drop across the GDT during arc current flow.
6	<b>Glow voltage</b>	Peak value of voltage drop across the GDT when a glow current is flowing.
7	<b>Impulse discharge current 8/20<math>\mu</math>s</b>	Current impulse with a nominal virtual front time of 8 $\mu$ s and a nominal time to half-value of 20 $\mu$ s.
8	<b>Alternating Discharge Current</b>	The rms value of an approximately sinusoidal alternating current passing through the gas discharge tube.
9	<b>Insulation Resistance</b>	Insulation resistance shall be measured from each terminal to every other terminal of the GDT. The test is performed with DC50V when normal spark-over Voltage 70~150V, others with DC100V.
10	<b>Capacitance</b>	The capacitance shall be measured once at 1 MHz between all terminals unless otherwise specified.

### Cautions and warnings

- I Surge arresters must not be operated directly in power supply networks.
- I Surge arresters may become hot in case of longer periods of current stress (danger of burning).
- I If the contacts of the surge arresters are defective, current stress can lead to the formation of sparks and loud noises.
- I Surge arresters may be used only within their specified values. In case of overload, the head contacts may fail or the component may be destroyed.
- I Damaged surge arresters must not be re-used.