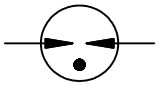
Gas Discharge Tubes (GDT) 2R-13A Series

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.

Electrical symbol



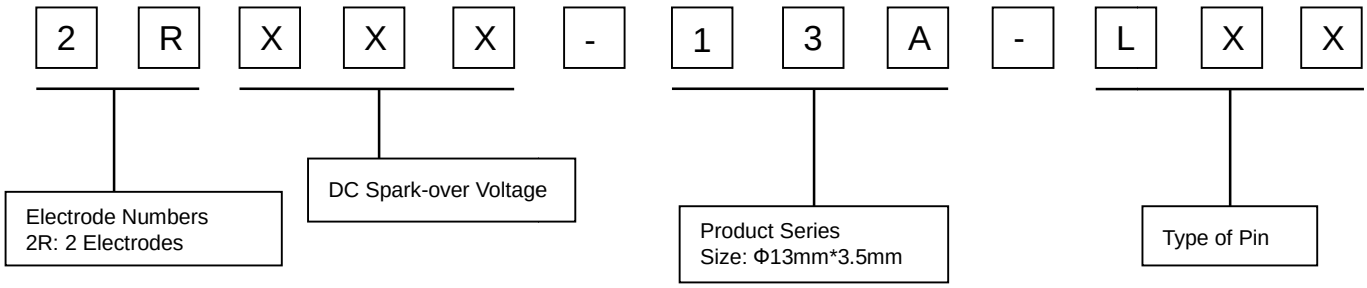
Features

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

Applications

- LED lighting
- Power supply
- Photovoltaic

Part Number Code



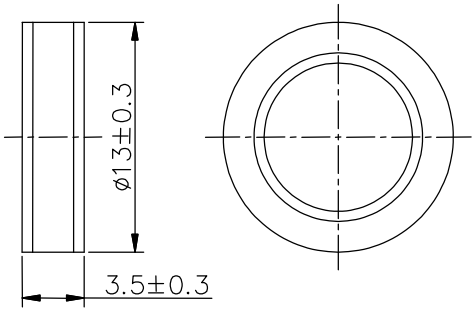
Electrical Characteristics

Model			2R090-13A	2R350-13A	2R600-13A	2R800-13A	2R1000-13A	Units
DC Spark-over Voltage [1) 2)]	at 100V/S		90±20%	350±20%	600±20%	800±20%	1000±20%	V
Impulse Spark-over Voltage	at 100V/μS		<500	<700	<900	<1100	<1400	V
	at 1KV/μS		<600	<800	<1000	<1200	<1500	V
Front of wave spark-over voltage	at 1.2/50 μs, 6 kV		<800	<1000	<1300	<1500	<2000	V
Life Ratings								
Nominal discharge current	8/20μS	15 times	20	20	20	20	20	KA
Maximum discharge current	8/20μS	2 times	40	40	40	40	40	KA
Impulse Current	10/350μs	1 times	2.5	2.5	2.5	2.5	2.5	KA
Insulation Resistance [3)]			>1	>1	>1	>1	>1	GΩ
Capacitance	at 1MHz		<5	<5	<5	<5	<5	pF
Glow Voltage	at 10mA		~60	~135	~135	~135	~135	V
Arc Voltage	at 1A		~10	~15	~18	~18	~18	V
Glow to Arc transition current			~1	~1	~1	~1	~1	A
Weight								
2RXXXX-13A-LS0			~1.80	~1.80	~1.80	~1.80	~1.80	g
2RXXXX-13A-LW2			~2.10	~2.10	~2.10	~2.10	~2.10	g
Operation and storage temperature			-40~+125	-40~+125	-40~+125	-40~+125	-40~+125	°C
Climatic category (IEC60068-1)			40/125/21	40/125/21	40/125/21	40/125/21	40/125/21	
Marking, blue positive			**RUILON 090**	**RUILON 350**	**RUILON 600**	**RUILON 800**	**RUILON 1000**	
Surface treatment			Matte-tin plated					

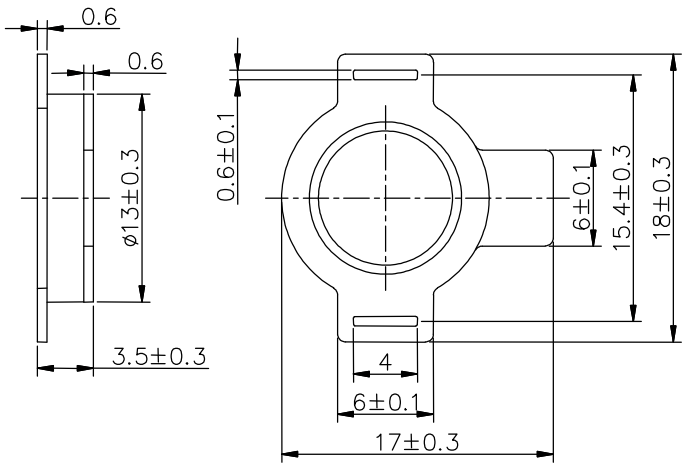
1) At delivery AQL 0.65 level II, DIN ISO 2859.
2) In ionized mode.
3) Insulation Resistance Measuring Voltage:
90V at DC 50V
Other at DC 100V

Dimensions (Unit: mm)

2RXXX-13A-LS0

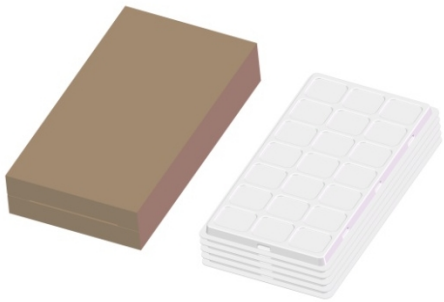
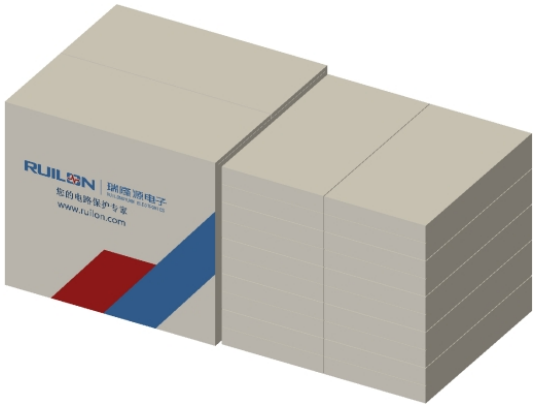


2RXXX-13A-LW2



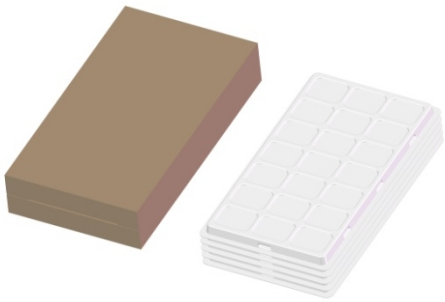
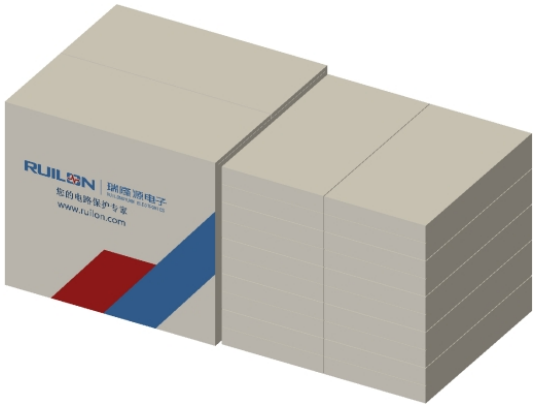
Packaging Information

2RXXX-13A-LS0

	PVC tray	Inner Box	Carton
Size	265×148×11mm	275×150×50mm	315×290×272mm
Quantity	MPQ: 1 tray=168pcs	MOQ: 1 Inner Box=5 trays=840pcs	1 Carton=10 Inner boxes=8,400pcs
Photos			

Gas Discharge Tubes (GDT) 2R-13A Series

2RXXX-13A-LW2

	PVC tray	Inner Box	Carton
Size	265×148×11mm	275×150×50mm	315×290×272mm
Quantity	MPQ: 1 tray=84pcs	MOQ: 1 Inner Box=5 trays=420pcs	1 Carton=10 Inner boxes=4,200pcs
Photos			

Terms and definitions

NO.	Item	Definitions
1	**Gas discharge tube(GDT)**	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	**DC Spark-over Voltage**	The voltage at which the gas discharge tube sparks over with slowly increasing d.c. voltage.
3	**Impulse Spark-over Voltage**	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	**Arc voltage**	Voltage drop across the GDT during arc current flow.
6	**Glow voltage**	Peak value of voltage drop across the GDT when a glow current is flowing.
7	**Impulse discharge current 8/20μs**	Current impulse with a nominal virtual front time of 8 μs and a nominal time to half-value of 20 μs.
8	**Alternating Discharge Current**	The rms value of an approximately sinusoidal alternating current passing through the gas discharge tube.
9	**Insulation Resistance**	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	**Capacitance**	The capacitance shall be measured once at 1 MHz between all terminals unless otherwise specified.

Cautions and warnings

- Surge arresters must not be operated directly in power supply networks.
- Surge arresters may become hot in case of longer periods of current stress (danger of burning).
- If the contacts of the surge arresters are defective, current stress can lead to the formation of sparks and loud noises.
- 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.
- Damaged surge arresters must not be re-used.