



Product Service

# CERTIFICATE

No. B 096048 0011 Rev. 00

**Holder of Certificate:** **BESTBRIGHT ELECTRONICS CO LTD**  
#3 Building, Modern Enterprise  
Accelerator Park  
Song Shan Lake High-tech Industrial Development Zone  
523808 Dongguan City, Guangdong Province  
PEOPLE'S REPUBLIC OF CHINA

**Certification Mark:**



**Product:** **Surge protection equipment  
(Gas discharge tubes)**

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition, the certification holder must not transfer the certificate to third parties. This certificate is valid until the listed date, unless it is cancelled earlier. All applicable requirements of the testing and certification regulations of TÜV SÜD Group have to be complied. For details see: [www.tuvsud.com/ps-cert](http://www.tuvsud.com/ps-cert)

**Test report no.:** 64105203048901

**Valid until:** 2025-08-04

**Date,** 2020-08-11

( Martin Ma )

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Model(s):

**B32-150-LF-ee, B32-200-LF-ee, B32-230-LF-ee, B32-300-LF-ee, B32-350-LF-ee, B32-400-LF-ee, B32-420-LF-ee, B32-470-LF-ee; 4532-075-LF-ee, 4532-091-LF-ee, 4532-121-LF-ee, 4532-151-LF-ee, 4532-201-LF-ee, 4532-231-LF-ee, 4532-301-LF-ee, 4532-351-LF-ee, 4532-401-LF-ee, 4532-421-LF-ee, 4532-471-LF-ee, 4532-501-LF-ee, 4532-601-LF-ee, 4532-801-LF-ee, 4532-1000-LF-ee, 4532-1200-LF-ee, 4532-1500-LF-ee**

**e can be A to Z or 0 to 9, or blank, indicates Packing, Marking or Customer code**

## Parameters:

Supply type:	a.c. or d.c.
Nominal d.c. sparkover voltage at 100 V/s:	Details see Electrical Rating table
Impulse sparkover voltage at 1 kV/μs:	Details see Electrical Rating table
Nominal impulse discharge current(8/20 μs):	Details see Electrical Rating table
Operating and storage range:	-40 °C to +90 °C

Type	Nominal d.c. sparkover voltage:	Impulse sparkover voltage	Classes of current-carrying capacity	Life test with pulses, voltage, waveshape 10/700	Insulation resistance		Capacitance
	at 100 V/s				at 1 kV/μs:	8/20 μs (kA)	
B32-150-LF-ee	150±20%	600	1(±5 times)	10 (±5Times)	50	>1	<0.5
B32-200-LF-ee	200±20%	700	1(±5 times)	10 (±5Times)	100	>1	<0.5
B32-230-LF-ee	230±20%	700	1(±5 times)	10 (±5Times)	100	>1	<0.5
B32-300-LF-ee	300±20%	950	1(±5 times)	10 (±5Times)	100	>1	<0.5
B32-350-LF-ee	350±20%	950	1(±5 times)	10 (±5Times)	100	>1	<0.5
B32-400-LF-ee	400±20%	1050	1(±5 times)	10 (±5Times)	100	>1	<0.5
B32-420-LF-ee	420±20%	1050	1(±5 times)	10 (±5Times)	100	>1	<0.5
B32-470-LF-ee	470±20%	1050	1(±5 times)	10 (±5Times)	100	>1	<0.5

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Type	Nominal d.c. sparkover voltage:	Impulse sparkover voltage	Classes of current-carrying capacity	Life test with pulses, voltage, waveshape 10/700	Insulation resistance		Capacitance
	at 100 V/s	at 1 kV/ $\mu$ s:	8/20 $\mu$ s (kA)	Times (4kV)	Test voltage (V d.c.)	(G $\Omega$ )	at 1MHz (pF)
4532-075-LF-ee	75 $\pm$ 20%	600	2 ( $\pm$ 5 times)	10 ( $\pm$ 5Times)	25	>1	<0.5
4532-091-LF-ee	90 $\pm$ 20%	600	2 ( $\pm$ 5 times)	10 ( $\pm$ 5Times)	50	>1	<0.5
4532-121-LF-ee	120 $\pm$ 20%	600	2 ( $\pm$ 5 times)	10 ( $\pm$ 5Times)	50	>1	<0.5
4532-151-LF-ee	150 $\pm$ 20%	600	2 ( $\pm$ 5 times)	10 ( $\pm$ 5Times)	50	>1	<0.5
4532-201-LF-ee	200 $\pm$ 20%	700	2 ( $\pm$ 5 times)	10 ( $\pm$ 5Times)	100	>1	<0.5
4532-231-LF-ee	230 $\pm$ 20%	700	2 ( $\pm$ 5 times)	10 ( $\pm$ 5Times)	100	>1	<0.5
4532-301-LF-ee	300 $\pm$ 20%	900	2 ( $\pm$ 5 times)	10 ( $\pm$ 5Times)	100	>1	<0.5
4532-351-LF-ee	350 $\pm$ 20%	900	2 ( $\pm$ 5 times)	10 ( $\pm$ 5Times)	100	>1	<0.5
4532-401-LF-ee	400 $\pm$ 20%	1000	2 ( $\pm$ 5 times)	10 ( $\pm$ 5Times)	100	>1	<0.5
4532-421-LF-ee	420 $\pm$ 20%	1000	1 ( $\pm$ 5 times)	10 ( $\pm$ 5Times)	100	>1	<0.5
4532-471-LF-ee	470 $\pm$ 20%	1000	1 ( $\pm$ 5 times)	10 ( $\pm$ 5Times)	100	>1	<0.5
4532-501-LF-ee	500 $\pm$ 20%	1100	1 ( $\pm$ 5 times)	10 ( $\pm$ 5Times)	100	>1	<0.5
4532-601-LF-ee	600 $\pm$ 20%	1200	1 ( $\pm$ 5 times)	10 ( $\pm$ 5Times)	100	>1	<0.5
4532-801-LF-ee	800 $\pm$ 20%	1600	1 ( $\pm$ 5 times)	10 ( $\pm$ 5Times)	100	>1	<0.5
4532-1000-LF-ee	1000 $\pm$ 20%	2400	1 ( $\pm$ 5 times)	10 ( $\pm$ 5Times)	100	>1	<0.5
4532-1200-LF-ee	1200 $\pm$ 20%	2600	1 ( $\pm$ 5 times)	10 ( $\pm$ 5Times)	100	>1	<0.5
4532-1500-LF-ee	1500 $\pm$ 20%	2800	1 ( $\pm$ 5 times)	10 ( $\pm$ 5Times)	100	>1	<0.5

**Tested according to:** EN 61643-311:2013

**Production Facility(ies):** 096048