



NEON BRACKET SERIES

Features

NEON bracket series are small size and very low cost products. As they mount super-bright neon tube developed by Toyogiken Co.,Ltd, a light source is even more excellent than incandescent lamp. As such neon bracket series products have a resistor respectively in them, they can be connected directly to the power source. Economically, super-bright neon bracket consumes electricity very little, and temperature rises moderately in comparison with incandescent lamp. Customers can choose a model out of rich varieties of products (40 and more models of neon bracket series) depending on particular application. Customers can also choose a model according to their budget. Super-bright neon bracket series are products for the new era, which Toyogiken Co.,Ltd. Can recommend with confidence.

In ordering LED bracket series

NP 10 - 2 9 - R S
(1) (2) (3) (4) (5) (6)

(1) Basic type

NP : With out resistor

(4) Body material

7 , 8, 9, 9B : Metal

B :Resin

(2) Body diameter

7..... φ 7

8..... φ 8

9..... φ 9

10..... φ 10

16..... φ 16

(5) Light color

R.....Red

G.....Green

W.....White

O.....Orange

(3) Voltage

1.....AC100V

2.....AC200V

(6) Terminal Shapes

S..... Solder terminal

B.....Screw terminal


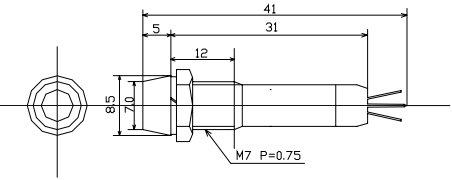
Rating and specification of Neon brackets

Test items	Specification (Neon bracket)
Rated voltage	100V AC / 200V AC
Rated amperage	Neon 1.6mA, Color 1.1mA
Insulation resistance	More than 100M Ω at 500V DC (between the charged part and the non-charged part)
Withstand voltage	For more than 1 minute at 10,000V AC (between charged part and non-charged part)
Break-down voltage	Less than 85% of the rated voltage
Delay in lighting	Less than 3 seconds at 80% of the rated voltage.
Life period	Time period until the break-down voltage reaches to a level more than 90% of the rated voltage, or until the brightness decreases to a level lower than 50% of its initial brightness, should be more than 20,000 hours.
Heat resistance	After 24 hours at 80 $^{\circ}$ C \pm 3 $^{\circ}$ C , insulation resistance and withstand voltage should be satisfied.
Low temperature resistance	After 24 hours at -25, insulation resistance and withstand voltage should be satisfied.
Moisture resistant property	After 48 hours at relative humidity 90~95% and 45 $^{\circ}$ C \pm 3 $^{\circ}$ C, insulation resistance and withstand voltage should be satisfied.
Heat cycle resistance	After 1 cycle of test (including 10 minutes at room temperature, 30 minutes at 80 $^{\circ}$ C, 10 minutes at room temperature and 30 minutes at -25 $^{\circ}$ C), insulation resistance and withstand voltage should be satisfied. No defective lamp should be found.
Vibration resistance property	After vibration force at 16~55Hz and amplitude 1mm is applied in each of X,Y and Z direction for 30 minutes respectively, insulation resistance and withstand voltage should be satisfied. No defective lamp should be found.
Drop resistance	After each sample is dropped 6 times naturally from a level of 1m to a wooden floor, no defective lamp should be found. No crack or slackness should be found.
Terminal strength	2 leads shall be soldered to a terminal and these leads shall be pulled in vertical direction with a 4Kf force for 1 minute. No problem should be found.

R resistor built-in type LED bracket


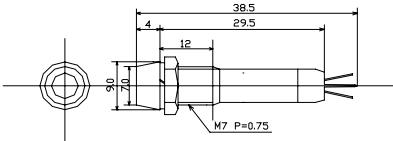
$\phi 7$ Resistor built-in NEON bracket

NP7-1M , NP7-2M

Color	AC 100V	AC 200V
Red	NP7-1M-RS	NP7-2M-RS
Green	NP7-1M-GS	NP7-2M-GS
White	NP7-1M-WS	NP7-2M-WS
Orange	NP7-1M-OS	NP7-2M-OS


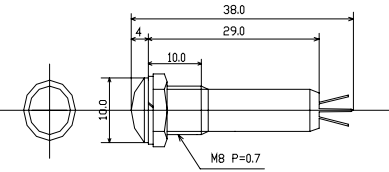
NP7-19 , NP7-29

Color	AC 100V	AC 200V
Red	NP7-19-RS	NP7-29-RS
Green	NP7-19-GS	NP7-29-GS
White	NP7-19-WS	NP7-29-WS
Orange	NP7-19-OS	NP7-29-OS

$\phi 8$ Resistor built-in NEON bracket


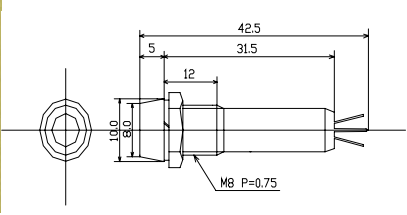
NP8-1D , NP8-2D

Color	AC 100V	AC 200V
Red	NP8-1D-RS	NP8-2D-RS
Green	NP8-1D-GS	NP8-2D-GS
White	NP8-1D-WS	NP8-2D-WS
Orange	NP8-1D-OS	NP8-2D-OS


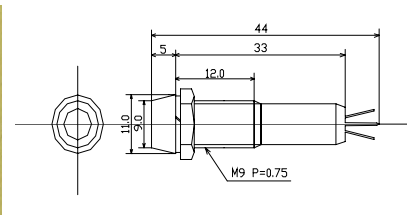
φ 8 Resistor built-in NEON bracket

NP8-19 , NP8-29

		Color	AC 100V	AC 200V
		Red	NP8-19-RS	NP8-29-RS
		Green	NP8-19-GS	NP8-29-GS
		White	NP8-19-WS	NP8-29-WS
		Orange	NP8-19-OS	NP8-29-OS


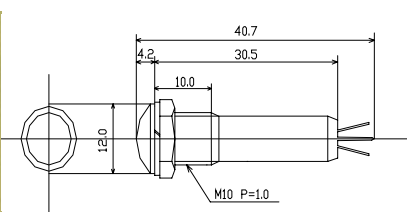
φ 9 Resistor built-in NEON bracket

NP9-19 , NP9-29

		Color	AC 100V	AC 200V
		Red	NP9-19-RS	NP9-29-RS
		Green	NP9-19-GS	NP9-29-GS
		White	NP9-19-WS	NP9-29-WS
		Orange	NP9-19-OS	NP9-29-OS


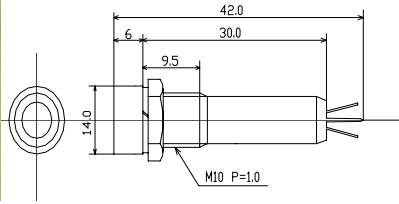
φ 10 Resistor built-in NEON bracket

NP10-1D , NP10-2D


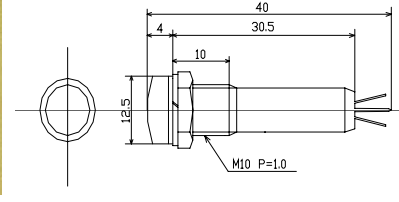
		Color	AC 100V	AC 200V
		Red	NP10-1D-RS	NP10-2D-RS
		Green	NP10-1D-GS	NP10-2D-GS
		White	NP10-1D-WS	NP10-2D-WS
		Orange	NP10-1D-OS	NP10-2D-OS

φ 10 Resistor built-in NEON bracket


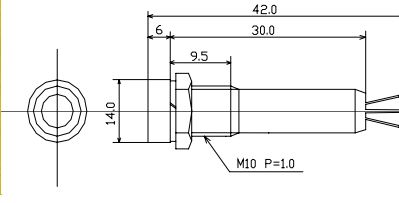
NP10-1DP , NP10-2DP

		Color	AC 100V	AC 200V
		Red	NP10-1DP-RS	NP10-2DP-RS
		Green	NP10-1DP-GS	NP10-2DP-GS
		White	NP10-1DP-WS	NP10-2DP-WS
		Orange	NP10-1DP-OS	NP10-2DP-OS


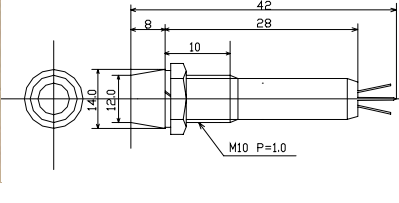
NP10-1H , NP10-2H

		Color	AC 100V	AC 200V
		Red	NP10-1H-RS	NP10-2H-RS
		Green	NP10-1H-GS	NP10-2H-GS
		White	NP10-1H-WS	NP10-2H-WS
		Orange	NP10-1H-OS	NP10-2H-OS

NP10-1HP , NP10-2HP


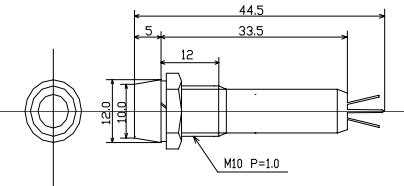
		Color	AC 100V	AC 200V
		Red	NP10-1HP-RS	NP10-2HP-RS
		Green	NP10-1HP-GS	NP10-2HP-GS
		White	NP10-1HP-WS	NP10-2HP-WS
		Orange	NP10-1HP-OS	NP10-2HP-OS

NP10-1M , NP10-2M

		Color	AC 100V	AC 200V
		Red	NP10-1M-RS	NP10-2M-RS
		Green	NP10-1M-GS	NP10-2M-GS
		White	NP10-1M-WS	NP10-2M-WS
		Orange	NP10-1M-OS	NP10-2M-OS


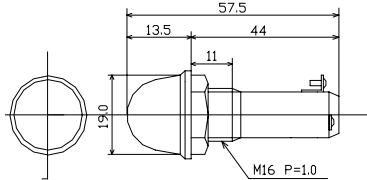
φ 10 Resistor built-in NEON bracket

NP10-19 , NP10-29


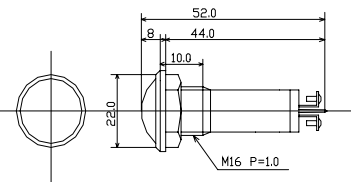
		Color	AC 100V	AC 200V
		Red	NP10-19-RS	NP10-29-RS
		Green	NP10-19-GS	NP10-29-GS
		White	NP10-19-WS	NP10-29-WS
		Orange	NP10-19-OS	NP10-29-OS

φ 16 Resistor built-in NEON bracket

NP16-1U , NP16-2U

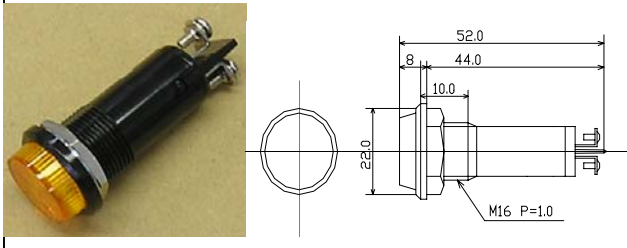
		Color	AC 100V	AC 200V
		Red	NP16-1U-RS	NP16-2U-RS
		Green	NP16-1U-GS	NP16-2U-GS
		White	NP16-1U-WS	NP16-2U-WS
		Orange	NP16-1U-OS	NP16-2U-OS

NP16-1DB , NP16-2DB

		Color	AC 100V	AC 200V
		Red	NP16-1DB-RS	NP16-2DB-RS
		Green	NP16-1DB-GS	NP16-2DB-GS
		White	NP16-1DB-WS	NP16-2DB-WS
		Orange	NP16-1DB-OS	NP16-2DB-OS

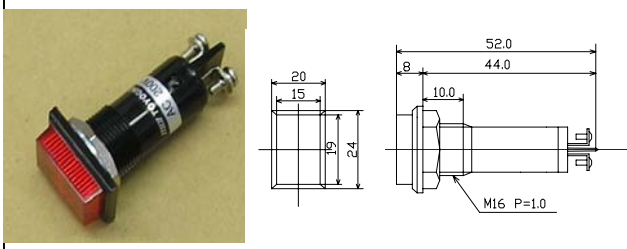
φ 16 Resistor built-in NEON bracket

NP16-1QB, NP16-2QB



Color	AC 100V	AC 200V
Red	NP16-1QB-RS	NP16-2QB-RS
Green	NP16-1QB-GS	NP16-2QB-GS
White	NP16-1QB-WS	NP16-2QB-WS
Orange	NP16-1QB-OS	NP16-2QB-OS

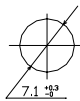
NP16-1LB, NP16-2LB



Color	AC 100V	AC 200V
Red	NP16-1LB-RS	NP16-2LB-RS
Green	NP16-1LB-GS	NP16-2LB-GS
White	NP16-1LB-WS	NP16-2LB-WS
Orange	NP16-1LB-OS	NP16-2LB-OS

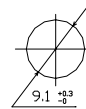
Panel cut dimension

φ 7 (7.1~7.4)



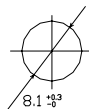
Panel cut dimension
Panel thickness 0.5 - 4.0mm

φ 9(9.1~9.4)



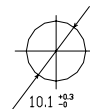
Panel cut dimension
Panel thickness 0.5 - 6.0mm

φ 8 (8.1~8.4)



Panel cut dimension
Panel thickness 0.5 - 6.0mm

φ 10 (10.1~10.4)



Panel cut dimension
Panel thickness 0.5 - 6.0mm