

DATE OF ISSUE	SPECIFICATIONS	SPEC.-L101
Jul. 07. 2003		1/ 4

1. PRODUCTS LED INDICATOR LIGHT

2. TYPE NAME

BD-1711R-5(B)	BD-1712G-5(B)	BD-1713A-5(B)
BD-1711R-12(B)	BD-1712G-12(B)	BD-1713A-12(B)
BD-1711R-24(B)	BD-1712G-24(B)	BD-1713A-24(B)
BD-1811R-5(B)	BD-1812G-5(B)	BD-1813A-5(B)
BD-1811R-12(B)	BD-1812G-12(B)	BD-1813A-12(B)
BD-1811R-24(B)	BD-1812G-24(B)	BD-1813A-24(B)

3. SUMMARY

This LED Indicator Light is Luminous LED and resistor in metal case.

TYPE	Emitting Material	Case Color	Luminous Color	
			Turn off	Light up
BD-1711R-□	GaP	Chrome	Red	Red
BD-1711R-□-B	"	Black	Red	Red
BD-1712G-□	"	Chrome	Green	Green
BD-1712G-□-B	"	Black	Green	Green
BD-1713A-□	GaAsP	Chrome	Amber	Amber
BD-1713A-□-B	"	Black	Amber	Amber
BD-1811R-□	GaP	Chrome	Red	Red
BD-1811R-□-B	"	Black	Red	Red
BD-1812G-□	"	Chrome	Green	Green
BD-1812G-□-B	"	Black	Green	Green
BD-1813A-□	GaAsP	Chrome	Amber	Amber
BD-1813A-□-B	"	Black	Amber	Amber

APPD.	CHK.	DESIGN	TRACE	OKAYA ELECTRIC INDUSTRIES CO.,LTD.
<i>Y. Kasahara</i>	<i>T. Misuo</i>	<i>T. Murano</i>	<i>M. Akahane</i>	

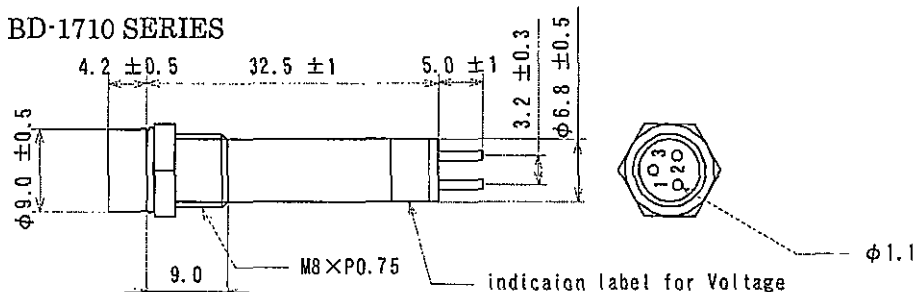
DATE OF ISSUE	SPECIFICATIONS	SPEC.-L101																																															
		2/																																															
4. EXPRANATION OF TYPE <u>BD-1711</u> <u>R</u> - <u>□</u> - <u>B</u> ① ② ③ ④ ⑤ ①Series name ②Type name ③Luminous color ④Supply voltage ⑤Case color (non: chrome, B: Black) 5. MAXIMUM RATING (Ta=25°C) <table border="1"> <tr> <th rowspan="2">Item</th> <th rowspan="2">Symbol</th> <th colspan="3">Supply Voltage</th> <th rowspan="2">Unit</th> </tr> <tr> <th>5Vtype</th> <th>12Vtype</th> <th>24Vtype</th> </tr> <tr> <td>Supply Voltage</td> <td>V_{FM}</td> <td>DC5V±10%</td> <td>DC12V±10%</td> <td>DC24V±5%</td> <td>V</td> </tr> <tr> <td>Reverse Voltage</td> <td>V_{RM}</td> <td colspan="3">3 MAX</td> <td>V</td> </tr> <tr> <td>Operating Temperature</td> <td>Topr</td> <td colspan="3">-25 ~ +40</td> <td>°C</td> </tr> <tr> <td>Storage Temperature</td> <td>Tstg</td> <td colspan="3">-25 ~ +70</td> <td>°C</td> </tr> <tr> <td>Test Voltage (terminal to case)</td> <td>TV</td> <td colspan="3">500V AC 50/60Hz 60 sec</td> <td></td> </tr> <tr> <td>Insulation Resistance (terminal to case)</td> <td>Rin</td> <td colspan="3">500V DC 100 MΩ MIN</td> <td></td> </tr> </table>					Item	Symbol	Supply Voltage			Unit	5Vtype	12Vtype	24Vtype	Supply Voltage	V _{FM}	DC5V±10%	DC12V±10%	DC24V±5%	V	Reverse Voltage	V _{RM}	3 MAX			V	Operating Temperature	Topr	-25 ~ +40			°C	Storage Temperature	Tstg	-25 ~ +70			°C	Test Voltage (terminal to case)	TV	500V AC 50/60Hz 60 sec				Insulation Resistance (terminal to case)	Rin	500V DC 100 MΩ MIN			
Item	Symbol	Supply Voltage					Unit																																										
		5Vtype	12Vtype	24Vtype																																													
Supply Voltage	V _{FM}	DC5V±10%	DC12V±10%	DC24V±5%	V																																												
Reverse Voltage	V _{RM}	3 MAX			V																																												
Operating Temperature	Topr	-25 ~ +40			°C																																												
Storage Temperature	Tstg	-25 ~ +70			°C																																												
Test Voltage (terminal to case)	TV	500V AC 50/60Hz 60 sec																																															
Insulation Resistance (terminal to case)	Rin	500V DC 100 MΩ MIN																																															
APPD.	CHK.	DESIGN	TRACE	OKAYA ELECTRIC INDUSTRIES CO.,LTD.																																													
<i>Y. Kasahara</i>	<i>T. Tanisue</i>	<i>T. Murano</i>	<i>M. Akahane</i>																																														

DATE OF ISSUE		SPECIFICATIONS					SPEC.-L101				
							3/				
6. OPERATING CHARACTERISTICS (Ta=25°C)											
BD-1711R.1811R SERIES											
Item	Symbol	Supply Voltage									Unit
		5 V type			12V type			24V type			
		MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	
Forward Current	I _F	—	13	18	—	13	18	—	13	18	mA
Reverse Current	I _R	—	—	100	—	—	100	—	—	100	μA
Luminous Intensity	I _v	2.0	—	—	2.0	—	—	2.0	—	—	mcd
Peak Wavelength	λ _p	—	635	—	—	635	—	—	635	—	nm
Spectral Line Half Width	Δλ	—	45	—	—	45	—	—	45	—	nm
BD-1712G.1812G SERIES											
Item	Symbol	Supply Voltage									Unit
		5 V type			12V type			24V type			
		MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	
Forward Current	I _F	—	15	20	—	15	20	—	15	20	mA
Reverse Current	I _R	—	—	100	—	—	100	—	—	100	μA
Luminous Intensity	I _v	1.0	—	—	1.0	—	—	1.0	—	—	mcd
Peak Wavelength	λ _p	—	570	—	—	570	—	—	570	—	nm
Spectral Line Half Width	Δλ	—	30	—	—	30	—	—	30	—	nm
BD-1713A.1813A SERIES											
Item	Symbol	Supply Voltage									Unit
		5 V type			12V type			24V type			
		MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	
Forward Current	I _F	—	15	20	—	15	20	—	15	20	mA
Reverse Current	I _R	—	—	100	—	—	100	—	—	100	μA
Luminous Intensity	I _v	3.0	—	—	3.0	—	—	3.0	—	—	mcd
Peak Wavelength	λ _p	—	590	—	—	585	—	—	585	—	nm
Spectral Line Half Width	Δλ	—	35	—	—	35	—	—	35	—	nm
APPD.		CHK.		DESIGN		TRACE		OKAYA ELECTRIC INDUSTRIES CO.,LTD.			
Y. Kasahara		T. Minoue		T. Murase		M. Akahane					

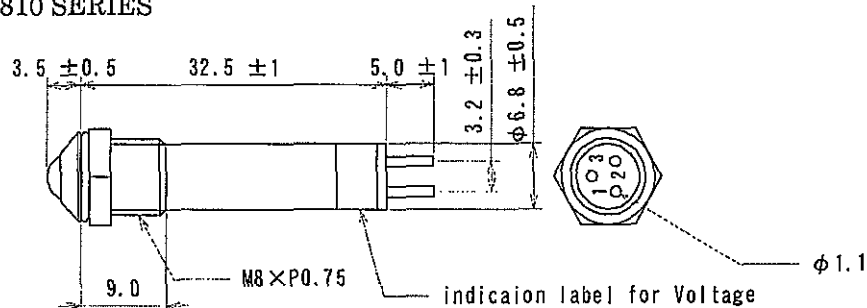
DATE OF ISSUE	SPECIFICATIONS	SPEC.-L101
		4/ F

7. DIMENSIONS (Unit: mm Tolerance ± 1.0)

BD-1710 SERIES



BD-1810 SERIES



Panel Cut : $\phi 8.2 \pm 0.2$

※There is no No.2 pin

8. Notice to parts instruction

- 8.1 Supply voltage must be below absolute maximum rated voltage.
- 8.2 Do not bend the terminal.
- 8.3 Do not heat over 70°C except the terminal.
- 8.4 Soldering must be done far from the body and be done in short time.
(270°C MAX, 3 sec. MAX.)
- 8.5 In case of setting on a panel, tighten the nut below 0.3N · m torque.
- 8.6 Do not set over 500 g · f on the head of a LED.

APPD.	CHK.	DESIGN	TRACE	OKAYA ELECTRIC INDUSTRIES CO.,LTD.
<i>Y. Kasahara</i>	<i>F. Masuo</i>	<i>T. Murano</i>	<i>M. Akahane</i>	