

Circuit Board Indicator, 3mm Quad-Level LED CBI

BL-LA4D3-A2004

■ FEATURES

- 3mm Quad-Level LED CBI
- Quad-level CBI configuration providing four vertically aligned indicator positions
- 3mm LED package suitable for high-density and multi-status panel layouts
- Pre-formed leads ensure precise PCB alignment across all four levels
- Black housing enhances contrast for clear and consistent visibility
- Long-life LED chip with stable, uniform luminous output
- UL 94V-0 rated PA66 housing
- Halogen-free and RoHS compliant



■ APPLICATIONS

- Four-step status indicators for instrumentation and control equipment
- Vertical indicator stacks in communication, testing, and monitoring devices
- Compact multi-point display modules
- Switch, keypad, and user-interface backlighting
- Consumer, commercial, and industrial equipment indicators

■ ATTENTION

This device is sensitive to electrostatic discharge.

Use appropriate ESD handling procedures during assembly.

■ Electrical-optical characteristics: (Ta=25°C) (Test Condition: IF=20mA)

Color Code	Single LED Color	Chip			Lens Type	Forward Voltage(VF) Unit:V		Luminous Intensity (Iv) Unit:mcd		Viewing Angle 2θ1/2 (deg)
		Emitted Color	Material	λP (nm)		Typ	Max	Min.	Typ.	
E	Mono color	amber	AlGaAs	610	Color Diffused	1.85	2.2	30	110	60
R	Mono color	Red	GaAsP/GaP	635	Color Diffused	2.1	2.5	10	70	60
Y	Mono color	Yellow	GaAsP/GaP	585	Color Diffused	2.1	2.5	1.5	20	60
G	Mono color	Green	GaP/GaP	570	Color Diffused	2.2	2.5	1.5	20	60
B	Mono color	Blue	InGaN	465	Color Diffused	2.2	2.5	1.5	20	60
W	Mono color	White	InGaN	-	Color Diffused	3.1	4.2	300	700	60
RG	Bi-color	Red	GaAsP/GaP	635	Color Diffused	2.1	2.5	10	70	60
		Green	GaP/GaP	570	Color Diffused	2.2	2.5	1.5	20	60
YG	Bi-color	Yellow	GaAsP/GaP	585	Color Diffused	2.1	2.5	1.5	20	60
		Green	GaP/GaP	570	Color Diffused	2.2	2.5	1.5	20	60
GB	Bi-color	Green	GaP/GaP	570	Color Diffused	2.2	2.5	1.5	20	60
		Blue	InGaN	465	Color Diffused	2.2	2.5	1.5	20	60
GE	Bi-color	Green	GaP/GaP	570	Color Diffused	2.2	2.5	1.5	20	60
		amber	AlGaAs	610	Color Diffused	1.85	2.2	30	110	60
RY	Bi-color	Red	GaAsP/GaP	635	Color Diffused	2.1	2.5	10	70	60
		Yellow	GaAsP/GaP	585	Color Diffused	2.1	2.5	1.5	20	60
GR	Bi-color	Green	GaP/GaP	570	Color Diffused	2.2	2.5	1.5	20	60
		Red	GaAsP/GaP	635	Color Diffused	2.1	2.5	10	70	60

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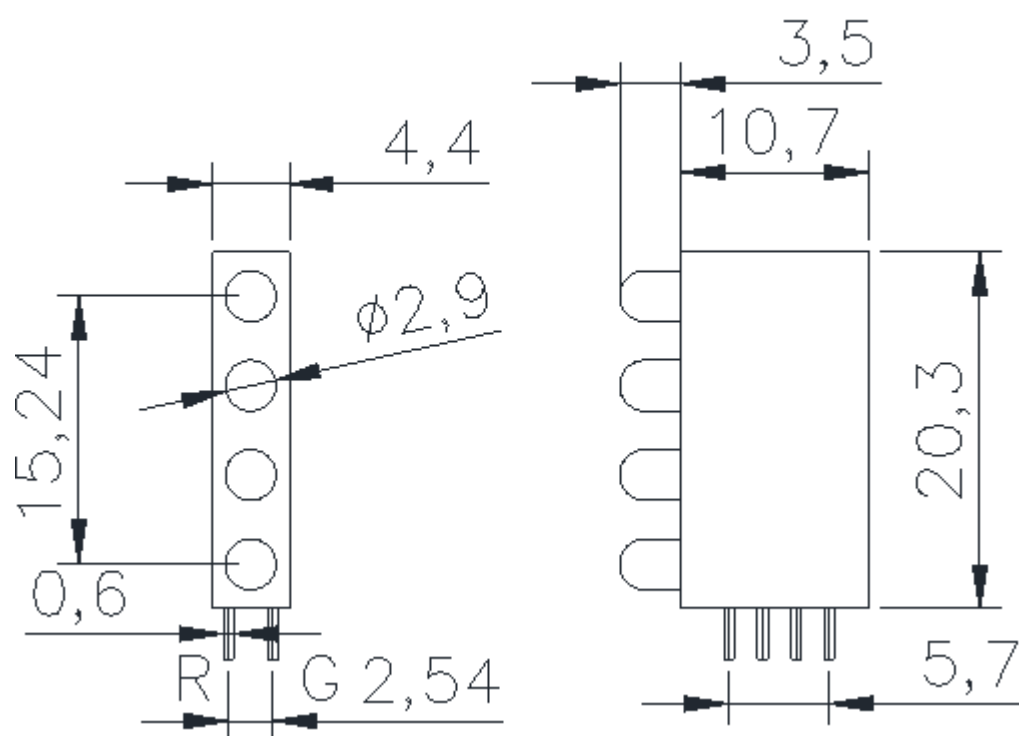
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Absolute maximum ratings (Ta=25°C)

Parameter	R	E	Y	G	B	W	Unit
Forward Current I_F	25	25	25	30	30	30	mA
Power Dissipation P_d	60	60	60	65	120	120	mW
Reverse Voltage V_R	5	5	5	5	5	5	V
Peak Forward Current I_{PF} (Duty 1/10 @1KHZ)	150	150	150	150	100	100	mA
Operation Temperature T_{OPR}	-40 to +80						°C
Storage Temperature T_{STG}	-40 to +85						°C
Lead Soldering Temperature T_{SOL}	Max.260±5°C for 3 sec Max. (1.6mm from the base of the epoxy bulb)						°C

Package configuration & Internal circuit diagram

BL-LA4D3-A2004 series



Notes:

1. All dimensions are in millimeters (inches)
2. Tolerance is ±0.25(0.01")unless otherwise noted.
3. Specifications are subject to change without notice.

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Product Select Guide

Part No	LED 1	LED 2	LED 3	LED 4
BL-LA4D3-A2004BBBB	B	B	B	B
BL-LA4D3-A2004GB-GB-GB-GB	GB	GB	GB	GB
BL-LA4D3-A2004GEGE	G	E	G	E
BL-LA4D3-A2004GE-RG-YG-YG	GE	RG	YG	YG
BL-LA4D3-A2004GGGE	G	G	G	E
BL-LA4D3-A2004GGGG	G	G	G	G
BL-LA4D3-A2004GGGR	G	G	G	R
BL-LA4D3-A2004GGGX	G	G	G	X
BL-LA4D3-A2004GGGY	G	G	G	Y
BL-LA4D3-A2004GGRG	G	G	R	G
BL-LA4D3-A2004GGRR	G	G	R	R
BL-LA4D3-A2004GGRX	G	G	R	X
BL-LA4D3-A2004GGRY	G	G	R	Y
BL-LA4D3-A2004GGXR	G	G	X	R
BL-LA4D3-A2004GGXX	G	G	X	X
BL-LA4D3-A2004GGYG	G	G	Y	G
BL-LA4D3-A2004GGYR	G	G	Y	R
BL-LA4D3-A2004GGYY	G	G	Y	Y
BL-LA4D3-A2004GRBX	G	R	B	X
BL-LA4D3-A2004GREE	G	R	E	E
BL-LA4D3-A2004GREY	G	R	E	Y
BL-LA4D3-A2004GRGG	G	R	G	G
BL-LA4D3-A2004GRGR	G	R	G	R
BL-LA4D3-A2004GRGX	G	R	G	X
BL-LA4D3-A2004GRGY	G	R	G	Y
BL-LA4D3-A2004GR-RG-RG-X	GR	RG	RG	X
BL-LA4D3-A2004GRRR	G	R	R	R
BL-LA4D3-A2004GRRX	G	R	R	X
BL-LA4D3-A2004GRRY	G	R	R	Y
BL-LA4D3-A2004GRXG	G	R	X	G
BL-LA4D3-A2004GRYG	G	R	Y	G
BL-LA4D3-A2004GRYR	G	R	Y	R
BL-LA4D3-A2004GRYY	G	R	Y	Y
BL-LA4D3-A2004GXEY	G	X	E	Y
BL-LA4D3-A2004GXGX	G	X	G	X
BL-LA4D3-A2004GXRX	G	X	R	X
BL-LA4D3-A2004GXXX	G	X	X	X
BL-LA4D3-A2004GXYY	G	X	Y	X
BL-LA4D3-A2004GYGG	G	Y	G	G

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BL-LA4D3-A2004GYGR	G	Y	G	R
BL-LA4D3-A2004GYGY	G	Y	G	Y
BL-LA4D3-A2004G-Y-RG-RG	G	Y	RG	RG
BL-LA4D3-A2004GYRR	G	Y	R	R
BL-LA4D3-A2004GYYG	G	Y	Y	G
BL-LA4D3-A2004GYRR	G	Y	Y	R
BL-LA4D3-A2004GYYY	G	Y	Y	Y
BL-LA4D3-A2004REGY	R	E	G	Y
BL-LA4D3-A2004RGBY	R	G	B	Y
BL-LA4D3-A2004RGGG	R	G	G	G
BL-LA4D3-A2004RGGY	R	G	G	Y
BL-LA4D3-A2004RGRG	R	G	R	G
BL-LA4D3-A2004RG-RG-RG-RG	RG	RG	RG	RG
BL-LA4D3-A2004RG-RG-X-RG	RG	RG	X	RG
BL-LA4D3-A2004RG-X-X-RG	RG	X	X	RG
BL-LA4D3-A2004RG-X-X-X	RG	X	X	X
BL-LA4D3-A2004RG-X-YG-RG	RG	X	YG	RG
BL-LA4D3-A2004RGYE	R	G	Y	E
BL-LA4D3-A2004RGYG	R	G	Y	G
BL-LA4D3-A2004RG-YG-RG-RG	RG	YG	RG	RG
BL-LA4D3-A2004RG-YG-RG-YG	RG	YG	RG	YG
BL-LA4D3-A2004RGYR	R	G	Y	R
BL-LA4D3-A2004RGYY	R	G	Y	Y
BL-LA4D3-A2004RRGG	R	R	G	G
BL-LA4D3-A2004RRGY	R	R	G	Y
BL-LA4D3-A2004RRRG	R	R	R	G
BL-LA4D3-A2004RRRR	R	R	R	R
BL-LA4D3-A2004RRRX	R	R	R	X
BL-LA4D3-A2004RRRY	R	R	R	Y
BL-LA4D3-A2004RRYG	R	R	Y	G
BL-LA4D3-A2004RRYR	R	R	Y	R
BL-LA4D3-A2004R-RY-R-RG	R	RY	R	RG
BL-LA4D3-A2004RXGY	R	X	G	Y
BL-LA4D3-A2004RXRR	R	X	R	R
BL-LA4D3-A2004RXRX	R	X	R	X
BL-LA4D3-A2004RXXR	R	X	X	R
BL-LA4D3-A2004RXXX	R	X	X	X
BL-LA4D3-A2004RXXY	R	X	X	Y
BL-LA4D3-A2004RYGG	R	Y	G	G
BL-LA4D3-A2004RYGR	R	Y	G	R
BL-LA4D3-A2004RYGY	R	Y	G	Y
BL-LA4D3-A2004RYRG	R	Y	R	G
BL-LA4D3-A2004RYRR	R	Y	R	R
BL-LA4D3-A2004RYRX	R	Y	R	X
BL-LA4D3-A2004RYYG	R	Y	Y	G

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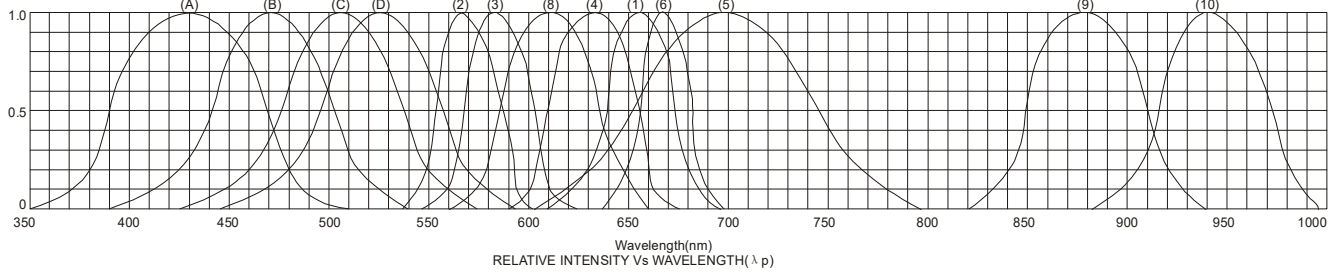
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BL-LA4D3-A2004RYYY	R	Y	Y	Y
BL-LA4D3-A2004WWWW	W	W	W	W
BL-LA4D3-A2004XGGX	X	G	G	X
BL-LA4D3-A2004XRGB	X	R	G	B
BL-LA4D3-A2004X-RG-RG-RG	X	RG	RG	RG
BL-LA4D3-A2004XRRR	X	R	R	R
BL-LA4D3-A2004XRYG	X	R	Y	G
BL-LA4D3-A2004XXGG	X	X	G	G
BL-LA4D3-A2004XXGR	X	X	G	R
BL-LA4D3-A2004XXRG	X	X	R	G
BL-LA4D3-A2004XXXG	X	X	X	G
BL-LA4D3-A2004XXX-RG	X	X	X	RG
BL-LA4D3-A2004X-X-YG-YG	X	X	YG	YG
BL-LA4D3-A2004X-YG-YG-YG	X	YG	YG	YG
BL-LA4D3-A2004XYRX	X	Y	R	X
BL-LA4D3-A2004YGGG	Y	G	G	G
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BL-LA4D3-A2004YGRX	Y	G	R	X
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BL-LA4D3-A2004YGXX	Y	G	X	X
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BL-LA4D3-A2004YG-YG-YG-RG	YG	YG	YG	RG
BL-LA4D3-A2004YG-Y-R-R	YG	Y	R	R
BL-LA4D3-A2004YRGX	Y	R	G	X
BL-LA4D3-A2004YRRG	Y	R	R	G
BL-LA4D3-A2004YRRR	Y	R	R	R
BL-LA4D3-A2004YRYR	Y	R	Y	R
BL-LA4D3-A2004YXGG	Y	X	G	G
BL-LA4D3-A2004YXXX	Y	X	X	X
BL-LA4D3-A2004YXXY	Y	X	X	Y
BL-LA4D3-A2004YXYR	Y	X	Y	R
BL-LA4D3-A2004YXYX	Y	X	Y	X
BL-LA4D3-A2004YYGG	Y	Y	G	G
BL-LA4D3-A2004YYRG	Y	Y	R	G
BL-LA4D3-A2004YYYY	Y	Y	Y	X
BL-LA4D3-A2004YYYY	Y	Y	Y	Y

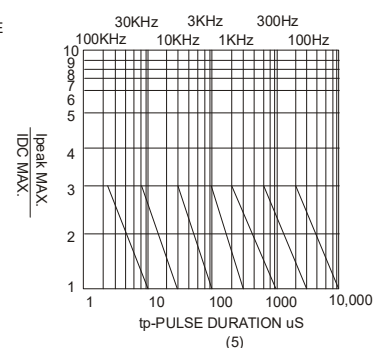
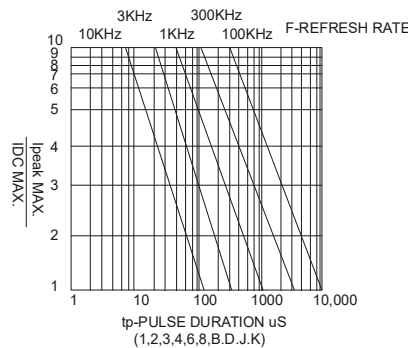
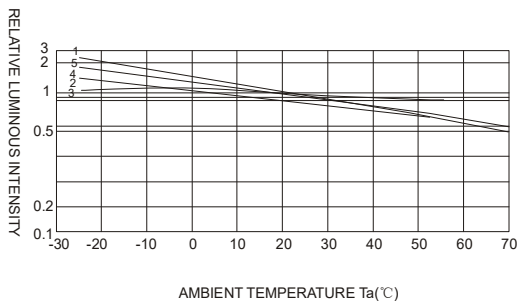
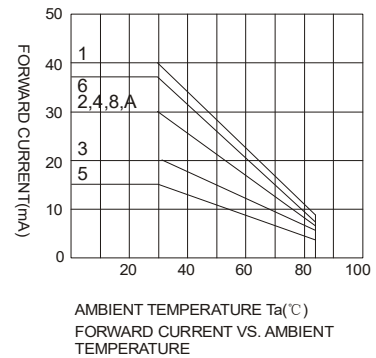
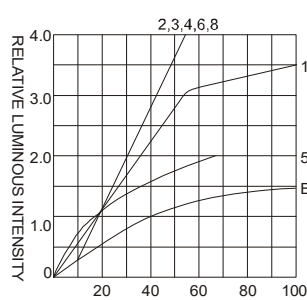
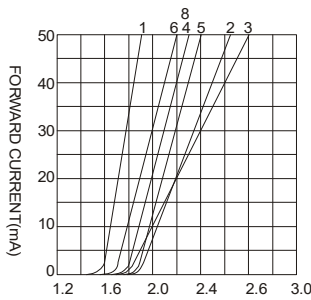
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■ Typical electrical-optical characteristics curves:



- | | |
|---|--------------------------------------|
| (1) - GaAsP/GaAs 655nm/Red | (9) - GaAlAs 880nm |
| (2) - GaP 570nm/Yellow Green | (10) - GaAs/GaAs & GaAlAs/GaAs 940nm |
| (3) - GaAsP/GaP 585nm/Yellow | (A) - GaN/SiC 430nm/Blue |
| (4) - GaAsP/GaP 635nm/Orange & Hi-Eff Red | (B) - InGaN/SiC 470nm/Blue |
| (5) - GaP 700nm/Bright Red | (C) - InGaN/SiC 505nm/Ultra Green |
| (6) - GaAlAs/GaAs 660nm/Super Red | (D) - InGaAl/SiC 525nm/Ultra Green |
| (8) - GaAsP/GaP 610nm/Super Red | |



NOTE:25°C free air temperature unless otherwise specified

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■ **Packing and weighting**

