

Small Square Format High Output Module Monochromatic Static Colors and “Turtle Friendly” Applications

Features and Benefits

- 1.48” square intensely concentrated light source
- **TFA (Turtle Friendly Amber)** version is AlInGaP LED with narrow wavelength, Florida Wildlife Commission (FWC) compliant
- Replaces legacy light sources with lower power and longer life
- Patented intelligent thermal design uses metal core printed circuit board (MCPCB) for thermal transfer and simple installation
- (2) mounting holes for mechanical attachment
- Pre-wired pigtailed are mechanically robust and reduce labor
- Protective conformal (transparent) coating for exterior applications
- Available in **RED, GREEN, BLUE, ORANGE, PURPLE, and CYAN**



BB04AM Series

Compatible LED Drivers

Recommended Maximum DC Input Current to Module	See Table 1
Typical DC input Voltage to Module	See Table 1

Ratings and Performance Specifications

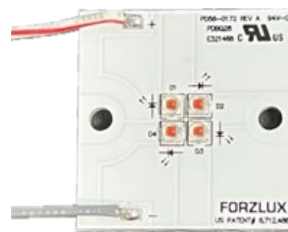
Nominal DC Power Consumption	See Table 1
Recommended Screw Installation Torque	75 inch pounds
Maximum Operating Range Ambient Temperature (Ta)	-40 to +50°C
Maximum Solder Pad Temperature (Ts)	+100°C
Nominal Weight	25 grams
Safety/Compliance UL Class 2 Recognized Component	E321468

Application Notes

1. The use of any washer (lock, flat, etc.), will void the warranty due to possible damage and/or shorting of LED and/or circuit board.
2. This module **REALLY** requires heatsinking at full power. The luminaire should allow heat to escape the system. Forzlux provides thermal testing of light engines in the luminaire for OEM customers to ensure long life and compliance with warranty.
3. Abnormal operating conditions such as elevated ambient temperatures can negatively impact lumen output, product lifetime and/or performance.

Physical Dimensions

1.48" square x 0.125" thick (PCB only)
 (2) Mounting holes 0.15" diameter
 Horizontal mounting spacing 1.125" center-to-center holes
 Vertical mounting spacing 0.74" (horizontal PCB centerline)
 12" nominal leads, 20AWG, 105°C
 White/red stripe positive, gray negative



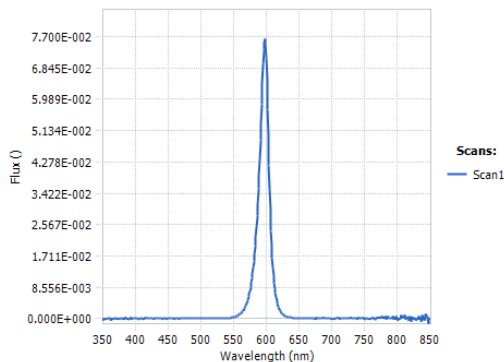
Dimensions are in inches
 Tolerance:
 X.X = ± 0.1"
 X.XX = ± 0.01"
 X.XXX = ± 0.005"

Entire top of module conformal coated with
 Humiseal 1B31 or equivalent.
 Ts, Solder Pad Maximum Temperature (any LED) = 105°C.

Table 1, Performance Characteristics at 25°C

Data from laboratory test measurements, actual results may vary.

Part Number	Typical CCT/DWL (Kelvin/nm)	Max Current (ADC)	Typical VF (VDC)	Typical Power (WDC)	Typical Lumens	Typical Efficacy (DC LPW)
BB04AM-TFA	595	1050	10.4	10.9	770	71
BB04AM-RED	622	350	8.8	3.1	290	94
BB04AM-GREEN	527	350	13.6	4.8	480	101
BB04AM-BLUE	470	350	12.0	4.2	152	36
BB04AM-ORANGE	575	350	11.2	3.9	380	97
BB04AM-PURPLE	546	350	10.4	3.6	235	65
BB04AM-CYAN	499	350	12.8	4.5	306	69



BB04AM-TFA
 FWC Compliant "Turtle Friendly Amber"
 Actual Integrating Sphere Test
 No lumens under 560nm

Packaging

Product is marked with SKU and lot information on non-LED side of module.
 Sold in groups of (48) unit(s) and packaged in ESD bags with SKU and lot information.

Warranty

5-Year limited warranty in accordance with published warranty conditions. Product must be used with compatible components (modules, drivers, engines and/or accessories) and no maximum ratings (such as Ts) shall be exceeded during any operating conditions of the system. If product is used with other manufacturer's product, compatibility must be recognized in writing by Forzlux.

Forzlux owns the following United States patents of which may be applicable to the design or manufacture of this product: 6712486, 6578986, 6846093, 7114831, 7306353, 7102172, 7108396, 7329024, 7387406, 7582911, 7649327, 8926145, 8729810. Additional granted patents, patents pending, and other IP protection rights may apply.