Aurora ™ Classic Linesource

Aurora line source modules' patented optics produce unequaled LED light intensity in a highly uniform linear beam with two optional focus positions. The Aurora modules have a wide range of uses for the machine vision market as well as many other applications.

The Aurora Classic model is available in five beam lengths with free convection cooled CW intensity > 2.5 MLux with pulsed intensity > 15 MLux, and air cooled CW intensity > 4.5 MLux.

Benefits:

- Uniform illumination line light
- Continuous high current or pulsed operation
- RoHS compliant - Environmentally friendly

VISIBLE AND IR:

- λ_p 445 nm thru near IR or white (5700K+/-400)

Features:

- 2.7 mm FWHM line width
- Nominal working distance is 37 mm
- Patented non-imaging and imaging optics
- High thermal conductivity metal core PCB
- COB array technology
- Convenient and hardy connectors

Options:

- Fixed illumination lengths: 4", 8", 12", 16", 24"
- Finite or infinite focus position
- Plastic or Glass collection optics
- Several PC board configurations
- Several cooling options
- Drivers and controllers

Typical Applications:

VISIBLE AND IR:

- Machine vision
- High speed printing
- Document verification
- Alternative biofuels (Algae growth)
- Fiber optic lamp replacement

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INNOVATIONS IN OPTICS

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DS-Aurora-Classic-200616

SPECIFICATIONS

The Aurora Classic is a multi-configurable linesource with a single color PCB using our standard 42 mil die. Peak wavelengths available are from 445 nm thru near IR or white . Multiple linear beam lengths as well as two focus configurations allow for flexibility and customization. The data below is provided as a general guideline.

Table 1

Assembly	Illumination Line Length [Inches]	Illumination Line Width [mm/FWHM]	Nominal Working DIstance [mm]	Beam Configuration
Classic	4, 8, 12, 16, 24	2.7	37	Finite or Infinite

The following data is typical for the Aurora Classic glass optics. Decrease intensity values by factor of 0.80 for plastic collection optics. Data is for 37 mm nominal working distance with lens in finite focus position. See plots on page 5 for infinte focus. The data represents the free convection cooled (no fan) configuration.

Bin	Current Per 4" Unit (Amps)	Voltage (V_f) Per 4" Unit	Electrical Power [Watts]	Intensity [mW/cm²]	Intensity [KLux]
F6					
RED (λ_p 630 nm)	1.4	11	15	520	1,070
D5					
GREEN (λ_p 527nm)	1.0	16	16	230	1,200
C5					
BLUE (λ_p 470 nm)	1.0	16	16	630	570
WH					
WHITE (5700K)	1.0	32	32	-	1,750

Parameter	Nominal Drive Conditions		Comment
	Min	Max	
Available peak λ's	445 nm	850 nm	Not all λ's in stock (Contact Sales Engineer)
Thermal impedance	–	<8.0 °C/W	Typical for 1 die at LED surface (5 in parallel)
Housing temperature	–	55 °C	Free convection cooling
Thermistor $B_{25/85}$	3574	3646	For 10 kΩ
Thermistor impedence	–	10 kΩ	Others available upon request
Available die size	11 mils	42 mils	Standard size 42 mil
Operating temperature	-40 °C	85 °C	Depending on drive conditions
Lifetime (Hours)	10,000	> 100,000	Depends on drive conditions and λ

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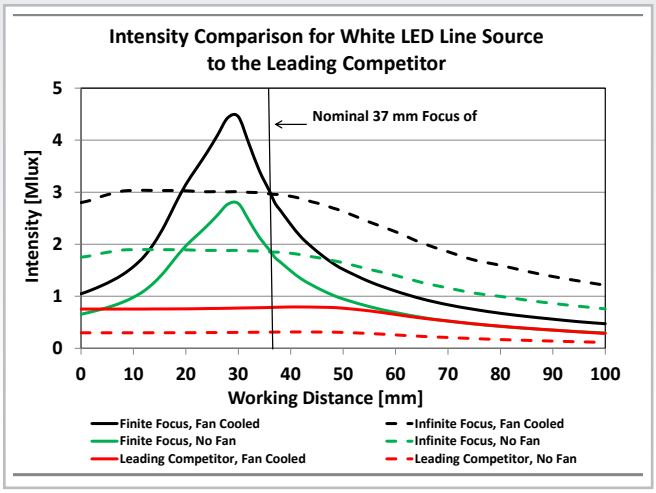

Figure 1

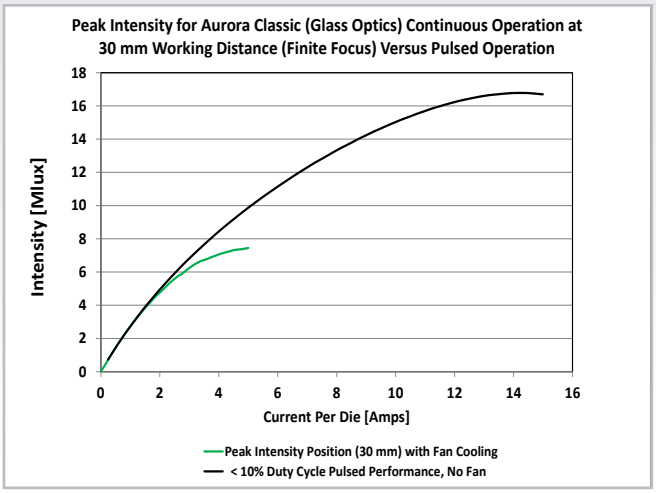

Figure 2

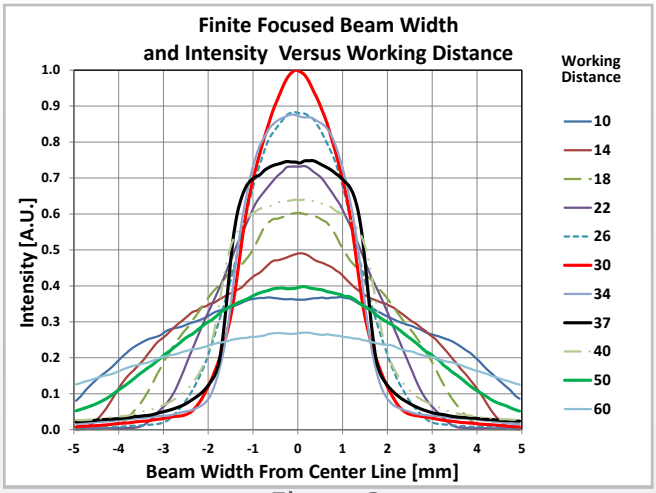

Figure 3

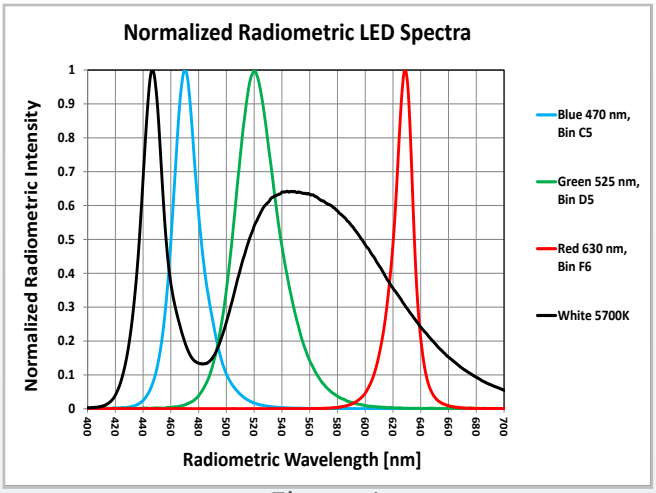

Figure 4

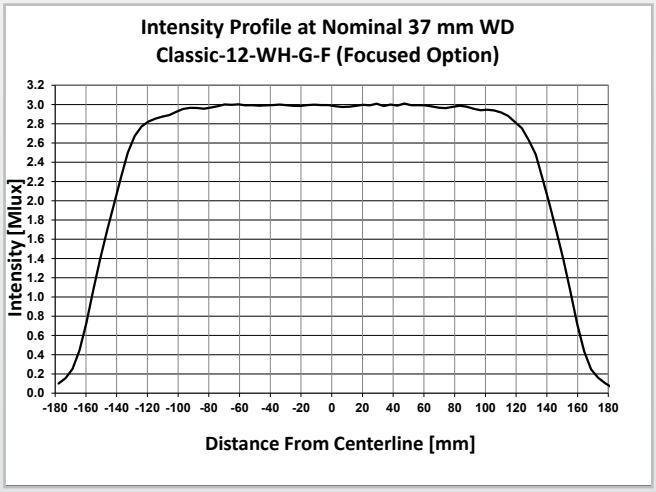

Figure 5

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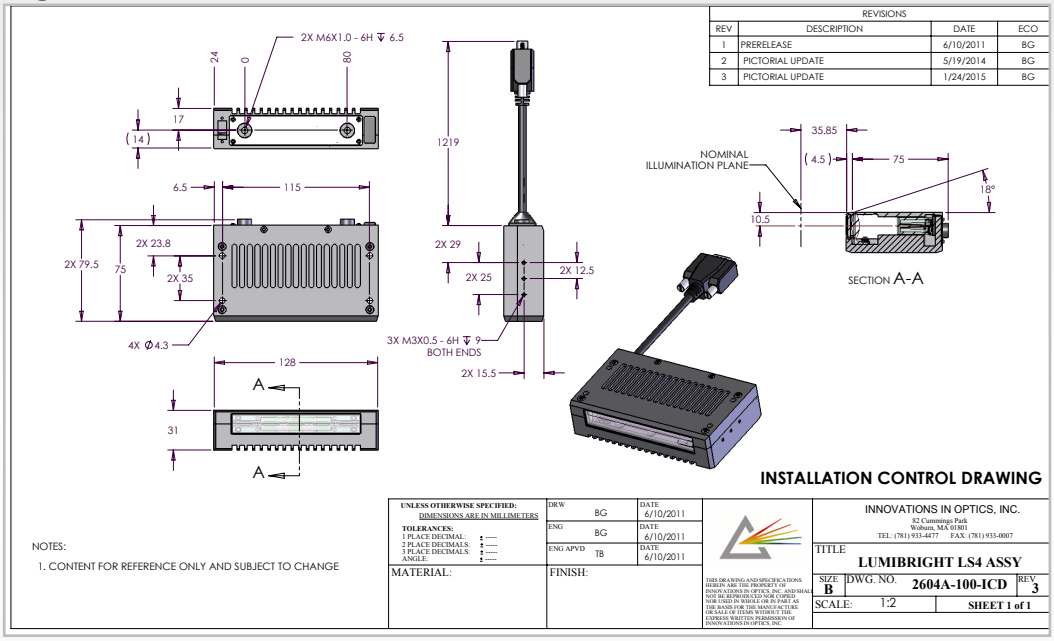
INSTALLATION CONTROL DRAWING

Figure 6



Additional ICD Links for: Classic 8 * Classic 12 * Classic 16 * Classic 24

ACCESSORIES

Figure 7

Cooling Fans

LumiBright DR Driver/ Controller

Wire Harness Assemblies

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