



# ENFIS QUATTRO Mini Array Hi Cri

The latest in ultra bright, chip on board, LED lattice arrays.  
Compact, colour-rich (R/A)GBW spot source, with the ultimate in high lumen,  
high CRI and colour temperature capability

## Features

### Mounted array for simple incorporation

- Array mounted on connectorized PCB
- Drop-in capability into existing luminaires
- Incorporating thermal measurement device
- Designed for passive or active cooling

### Densely packed lattice CoB array

- 144 LEDs in 4cm<sup>2</sup>
- Superior dynamic range
- Ultra bright output

### High power useable light

- Drive to 200W
  - CCT <3000K to >6500K
  - CRI > 90
  - Potential for pulsing together with analogue and PWM dimming
- ### Rugged and proven
- Superior >20,000 hour lifetime
  - Reliable and repeatable performance operated in the harshest of environments

### Inbuilt monitoring / control

- Potential for active monitoring and closed loop feedback and control of light output using integrated and calibrated photodiodes
- Inbuilt capability for temperature monitoring control and protection via integrated temperature sensors

## PCB Arrays

Enfis can reduce the time, cost and risk of integration by offering purpose mounted ultra-bright multi-channel/colour arrays. These can be readily driven by appropriate drivers.

## Smart Array Technology

Light output from Enfis Quattro-Mini arrays may be monitored and controlled via patent-pending integrated photo-detection system, enabling precise control and repeatable light output.

## Thermal Management

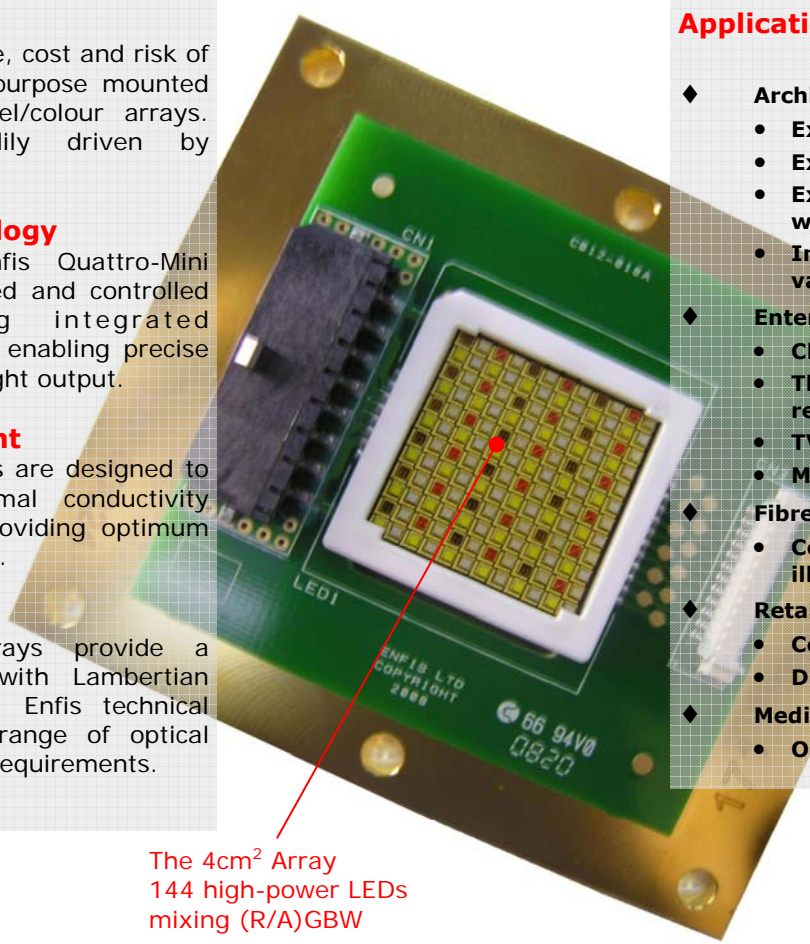
Enfis Quattro-Mini arrays are designed to provide excellent thermal conductivity and integrate simply providing optimum performance and lifetime.

## Optics

Enfis Quattro-Mini arrays provide a compact spot source with Lambertian emission characteristics. Enfis technical experts can advise a range of optical solutions to match your requirements.

## Applications & Markets

- ◆ **Architectural lighting**
  - Exterior buried spotlights
  - Exterior floodlights
  - Exterior/interior wall-washing
  - Interior colour/CCT variable lighting
- ◆ **Entertainment lighting**
  - Club/bar lighting
  - Theatre spot gel replacement
  - TV/film lighting
  - Moving spots
- ◆ **Fibre optic lighting**
  - Colour/CCT changing illuminator sources
- ◆ **Retail lighting**
  - Colour/CCT variable spot
  - Display lighting
- ◆ **Medical lighting**
  - Operating room lighting



The 4cm<sup>2</sup> Array  
144 high-power LEDs  
mixing (R/A)GBW

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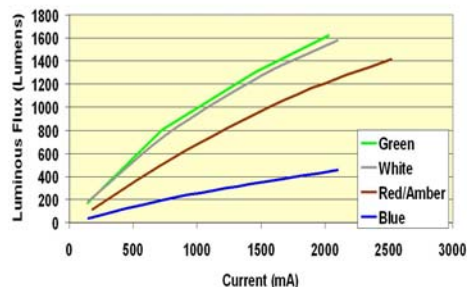
## Technical Specification

### Electro-Optical Characteristics

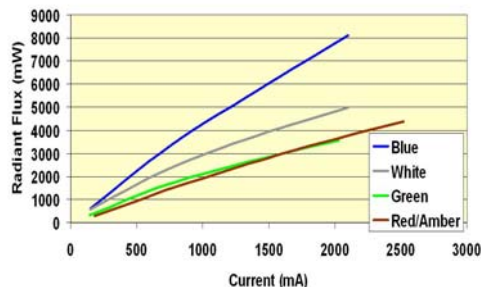
Channel	Red / Amber			Green			Blue			White		
Item	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max
Rated Current If (mA)		2100			1760			1550			1600	
Forward Voltage Vf (Volts)	20	24	29	24	28	32	28	32	36	27	31	35
Peak Wavelength $\lambda_p$ (nm)	620	630	640	510	520	530	450	465	470			
Dominant Wavelength $\lambda_d$ (nm)	600	610	620	518	528	538	455	470	475			
Spectral Width $\Delta\lambda$ (nm)				32	37	42	15	23	30			
Colour Temperature CCT (K)										3900	4250	4600
Total Radiant Flux $\Phi_R$ (mW)	3200	4000		2350	2800		5500	6900				
Radiant Flux Density $\Phi_{R/A}$ (mW/cm <sup>2</sup> )	661	826		486	579		1136	1426				
Total Luminous Flux $\Phi_L$ (Lumens)	800	1000		1000	1250		350	420		1170	1400	
Luminous Flux Density $\Phi_{L/A}$ (lm/cm <sup>2</sup> )	165	207		207	258		72	87		242	289	
Total Electrical Power P (W)		50			50			50			50	

All measurements performed at a heatsink temperature of 25°C and each Channel is capable of up to 80W for increased light output

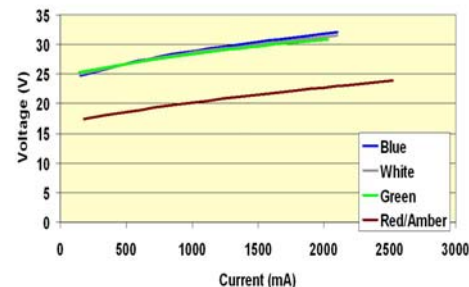
LUMINOUS FLUX GRAPH



RADIANT FLUX GRAPH



IV GRAPH



#### Storage Regime

Storage Temperature -20°C to +85°C

#### Weight

Array 0.2kg

#### Heat Generation

Proper thermal design of the end product is of paramount importance. The operational junction temperature of each LED chip should be kept below 125°C.

Please contact Enfis for further support in this matter.

#### Connector Types (not supplied)

Drive Molex 0436500812

Thermistor / Feedback Molex 532611271

#### Cleaning

Avoid touching the LED array surface.

To clean—BLOW surface with either dry air or nitrogen gas

#### Eye Safety Precautions

The light output of the products may cause injuries to human eyes in circumstances where the products are viewed directly with unshielded eyes for more than a few seconds.

Please refer to IEC 60825-1:2001 for further information



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