



# ENFIS QUATTRO Mini Array NIR 870nm

The latest in ultra bright, chip on board, LED lattice arrays.  
Compact, single colour spot source.

## 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
  - 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.

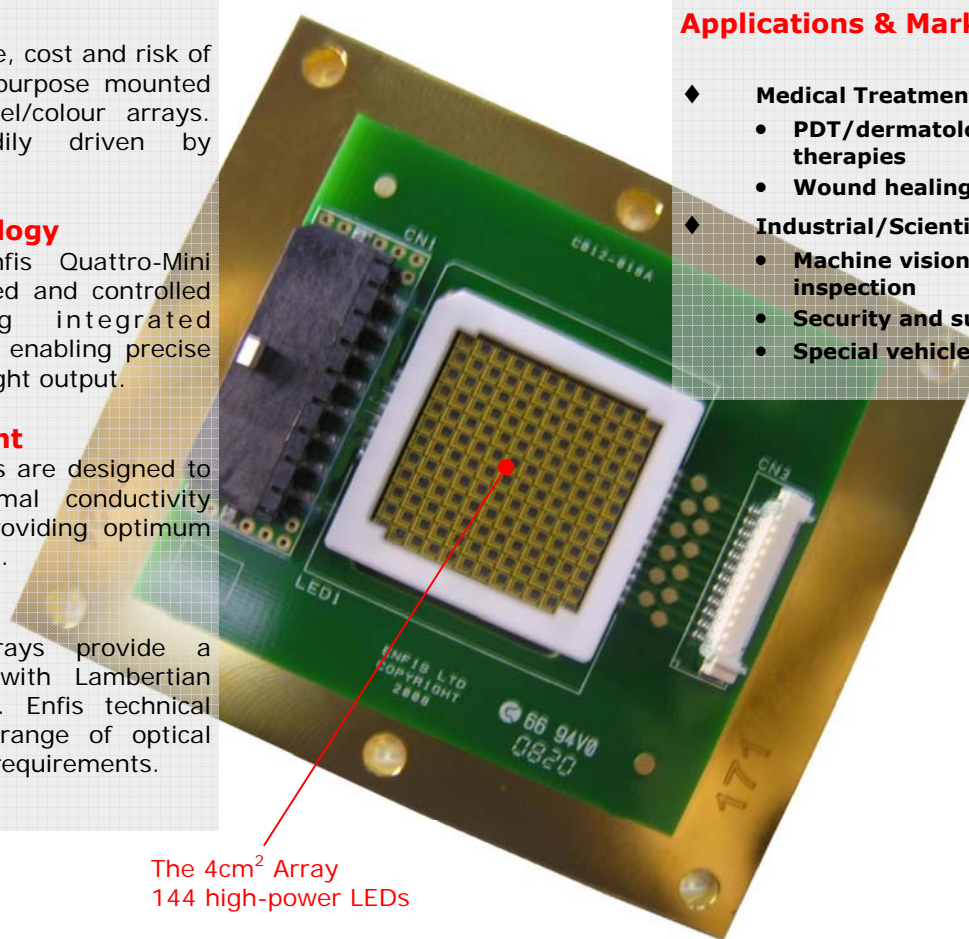
## Optics

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

- ◆ **Medical Treatment**
  - PDT/dermatological therapies
  - Wound healing
- ◆ **Industrial/Scientific lighting**
  - Machine vision and inspection
  - Security and surveillance
  - Special vehicle lighting

The 4cm<sup>2</sup> Array  
144 high-power LEDs



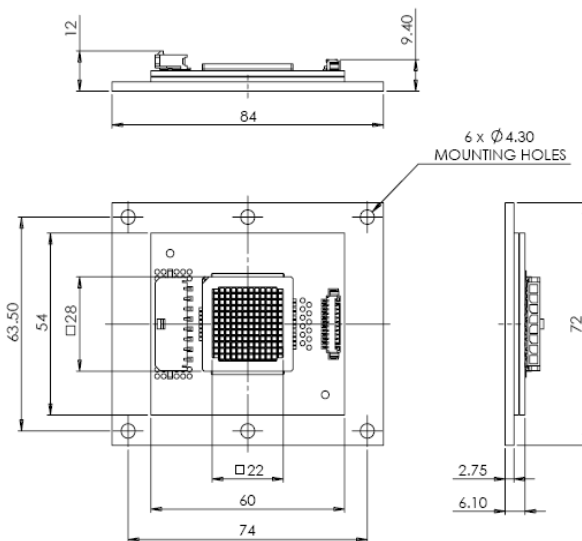


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## Technical Specification

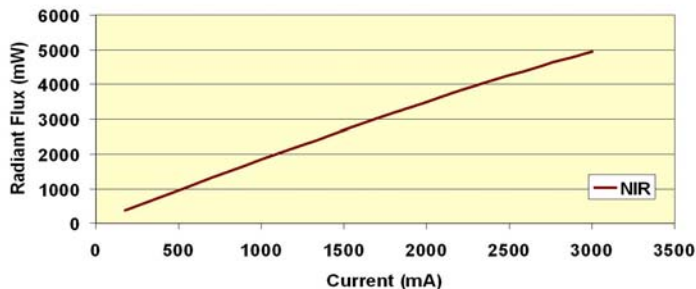
### Electro-Optical Characteristics

Channel	Single Channel			All Channels		
Item	Min	Typ	Max	Min	Typ	Max
Rated Current If (mA)		2950			11800	
Forward Voltage Vf (Volts)	14	17	21	14	17	21
Peak Wavelength $\lambda_p$ (nm)	850	870	890	850	870	890
Spectral Width $\Delta\lambda$ (nm)	40	50	60	40	50	60
Total Radiant Flux $\Phi_R$ (mW)	4500	5000		17000	20000	
Radiant Flux Density $\Phi_R/A$ (mW/cm <sup>2</sup> )	930	1033		3512	4132	
Total Electrical Power P (W)		50			200	

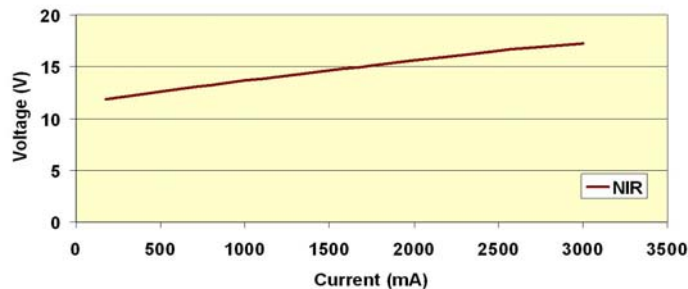


All measurements performed at a heatsink temperature of 25°C

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

