



ENFIS UNO Array 6x6 RGBA

Rich RGBA spot-source colour/CCT changing with 36 high-power LEDs in just 1cm²

Features & Benefits

- Intense, high-power RGBA spot source
- Superior colour-mixing via dense packaging and interleaving of colours
- Addition of Amber channel improves richness of colour-mix over conventional RGB technology
- Enables active monitoring of light output via embedded smart array technology
- Long-life and reliable, high-performance due to excellent thermal conductivity
- Simple integration via connectorized PCB with mounting holes

Outline Specification

- Typical power:
 - R: 2100mW
 - G: 900mW
 - B: 2450mW
 - A: 620mW
- 1cm² Aperture
- Input power: up to 50W

Light Engine Integration

Enfis can eliminate the time, cost and risk of integration by offering our arrays as part of a complete light engine solution

Smart Array Technology

Light output from Enfis Arrays can be monitored and controlled via a patent-pending integrated photo-detection system, enabling precise control of light output.

Thermal Management

Enfis arrays are designed to provide excellent thermal conductivity and to be integrated effectively with thermal hardware to ensure optimum performance and life.

Optics

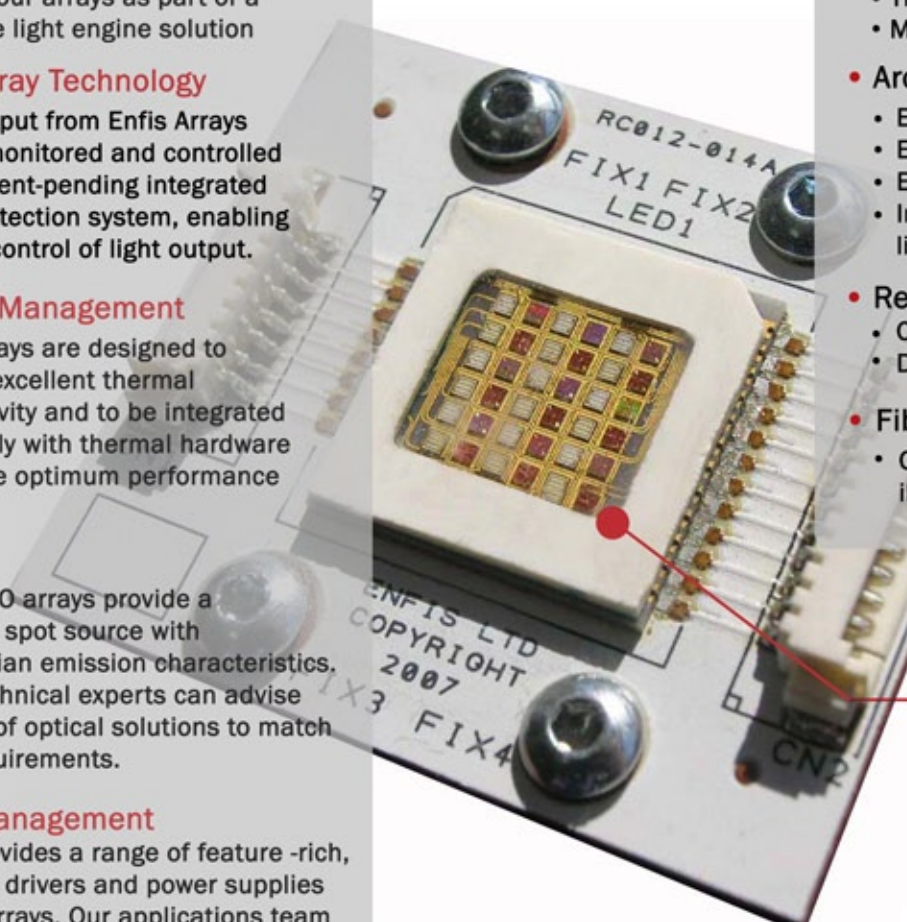
Enfis UNO arrays provide a compact spot source with Lambertian emission characteristics. Enfis technical experts can advise a range of optical solutions to match your requirements.

Power Management

Enfis provides a range of feature-rich, powerful drivers and power supplies for our arrays. Our applications team can provide you with a solution for your specific requirements.

Applications & Markets

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



The 1cm x 1cm Array:
36 high-power LEDs
mixing RGBA

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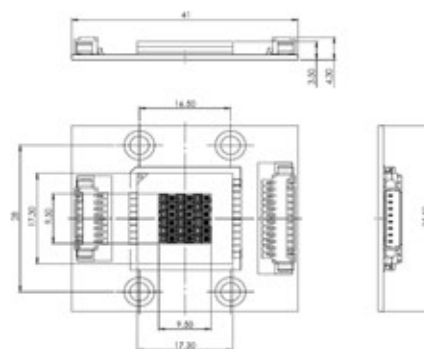
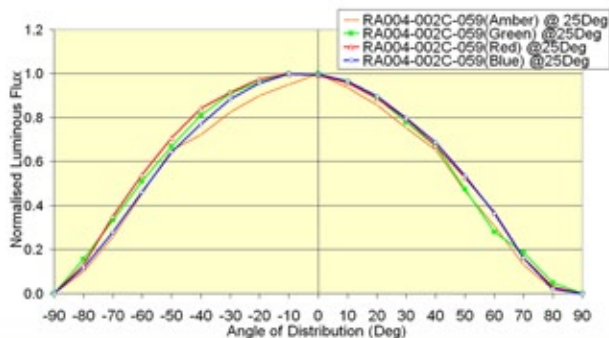
ENFIS UNO Array 6x6 RGBW

Technical Specification

Electro-Optical Characteristics

| Channel Item | Red | | | Green | | | Blue | | | Amber | | |
|--|------|------|-----|-------|-----|-----|------|------|-----|-------|-----|-----|
| | Min | Typ | Max | Min | Typ | Max | Min | Typ | Max | Min | Typ | Max |
| Rated Current I_f (mA) | 690 | 700 | 710 | 590 | 600 | 610 | 590 | 600 | 610 | 690 | 700 | 710 |
| Forward Voltage V_f (Volts) | 22 | 26 | 30 | 30 | 32 | 36 | 31 | 33 | 37 | 20 | 24 | 28 |
| Peak Wavelength λ_p (nm) | 620 | 630 | 640 | 510 | 520 | 530 | 455 | 465 | 475 | 590 | 595 | 600 |
| Dominant Wavelength λ_d (nm) | 610 | 620 | 630 | 518 | 528 | 538 | 460 | 470 | 480 | 587 | 592 | 597 |
| Spectral Width $\Delta\lambda$ (nm) | 12 | 18 | 22 | 28 | 36 | 42 | 19 | 23 | 27 | 12 | 18 | 22 |
| Total Radiant Flux Φ_R (mW) | 1800 | 2100 | | 810 | 900 | | 1960 | 2450 | | 550 | 620 | |
| Radiant Flux Density $d\Phi_R/dA$ (mW/cm ²) | 1487 | 1735 | | 669 | 744 | | 1619 | 2025 | | 454 | 512 | |
| Total Luminous Flux Φ_L (Lumen) | 300 | 400 | | 300 | 375 | | 116 | 145 | | 250 | 300 | |
| Luminous Flux Density Φ_L/A (Lumen/cm ²) | 247 | 330 | | 247 | 310 | | 95 | 120 | | 206 | 247 | |
| Total Electrical Power P (W) | | 18 | 21 | | 19 | 22 | | 20 | 22 | | 17 | 20 |

UNO-RGBW Far Field Distribution



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 on this matter.

Handling LED Array

Contact with the encapsulant on the surface of the LED array must be avoided to prevent damage. Do not apply pressure to the encapsulant or allow it to come into contact with the sharp objects. During operation the encapsulant will be hot and contact should be avoided.

Static Electricity

Care must be taken when handling, these products are sensitive to static electricity. Observe static handling precautions



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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