

NYAG (GARNET) PRODUCT FAMILY



Intematix yellow and green NYAGs (Garnets) are among the highest efficiency phosphors in the industry. While the high brightness, thermal stability and reliability make yellow NYAGs a standard in phosphor-converted LEDs, the green NYAGs offer many of the same benefits. These features make NYAG ideal for every application from mobile devices to general lighting. With the addition of green NYAG to the portfolio, higher efficiency warm white lighting is now possible. Intematix NYAG is available in different particle size ranges so you can choose the size that best fits your deposition process and packaging requirements.

Features

- High efficiency, >95%
- Uniform particle morphology
- Choice of yellow and green wavelengths, 526-575nm
- Resistant to heat and humidity

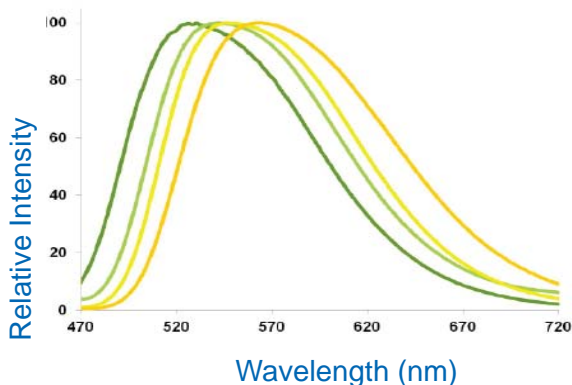
Benefits

- High lumens/watt for cool white
- High yield LED package manufacturing
- New green enables efficient warm white with shorter wavelength red
- Proven solution for both backlighting and general lighting

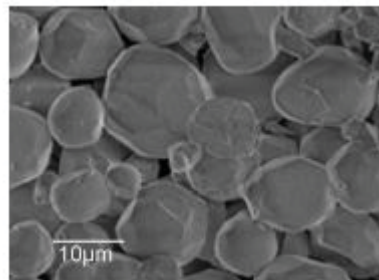
Applications

- Display Backlighting
 - TV and monitor
 - Tablet PC and mobile display
- General Lighting
 - LED retrofit lamp
 - Commercial / industrial
 - Street lighting
- Automotive Lighting
 - Head lamps, Daytime Running Lamps (DRL)
 - Back-up lamps

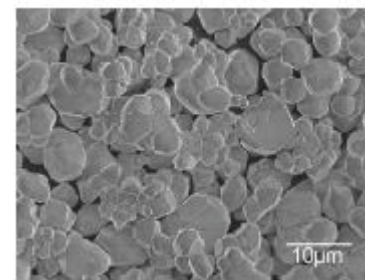
Extensive Spectral Distribution



Superior Particle Morphology



Large particle, 13 μ m



Small particle, 8 μ m

Intematix NYAG Phosphor Product Line

Yellow NYAGs for low to high power LEDs

Product	Peak Wavelength	Color Point		Particle Size
	λ_p (nm)	CIE _x	CIE _y	D50V (μ m)
NYAG 4056-01-13	542	0.403	0.559	13.5
NYAG 4156	543	0.400	0.560	8, 11, 15, 18
NYAG 4255	545	0.418	0.554	8.5, 13, 18
NYAG 4355	551	0.426	0.548	6, 10, 13.5, 18, 20
NYAG 4354	553	0.435	0.542	13, 18, 20
NYAG 4454	558	0.444	0.536	4, 5.5, 8, 8.5, 13.5, 18, 20
NYAG 4454-EL	559	0.448	0.533	14, 18, 20
NYAG 4653	562	0.457	0.528	8, 12.5, 15, 18
NYAG 4752	566	0.465	0.521	8.5, 13, 15, 18
NYAG 4751	570	0.475	0.513	8.5
NYAG 4851	572	0.483	0.506	8.5, 13.5
NYAG 4950	575	0.487	0.502	8, 14

Note: There may be minor differences in color point and wavelength for some of the particle sizes listed within a product.

Green NYAGs for 80 CRI Lighting

Product	Peak Wavelength	Color Point		Particle Size
	λ_p (nm)	CIE _x	CIE _y	D50V (μ m)
GNYAG 3557	526	0.345	0.569	11, 15, 18
GNYAG 3657	531	0.361	0.568	11, 15, 18
GNYAG 3757	534	0.371	0.566	8, 11, 15, 18
GNYAG 3856	538	0.380	0.564	15, 18
GNYAG 3956	540	0.394	0.562	11, 15
GNYAG 4056	543	0.403	0.558	11, 15

Additional product options with alternative particle sizes may be available. Please consult your local Intematix sales representative for additional information.