How LaserLight Shines in Defense & Security

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How LaserLight Shines in Defense & Security

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Imagine what could you do with a light source that:

- Is as bright and directional as a laser – but still eyesafe
- Can shine in the visible or infrared – or both at once
- Can be modulated to carry information – at 25 Gb/s rates
- But there's never been a source like this – until now

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Let us introduce you to that source: LaserLight

- The world's brightest and most innovative illumination source
- From a company co-founded by a Nobel laureate, and which holds over 500 patents in photonics technology

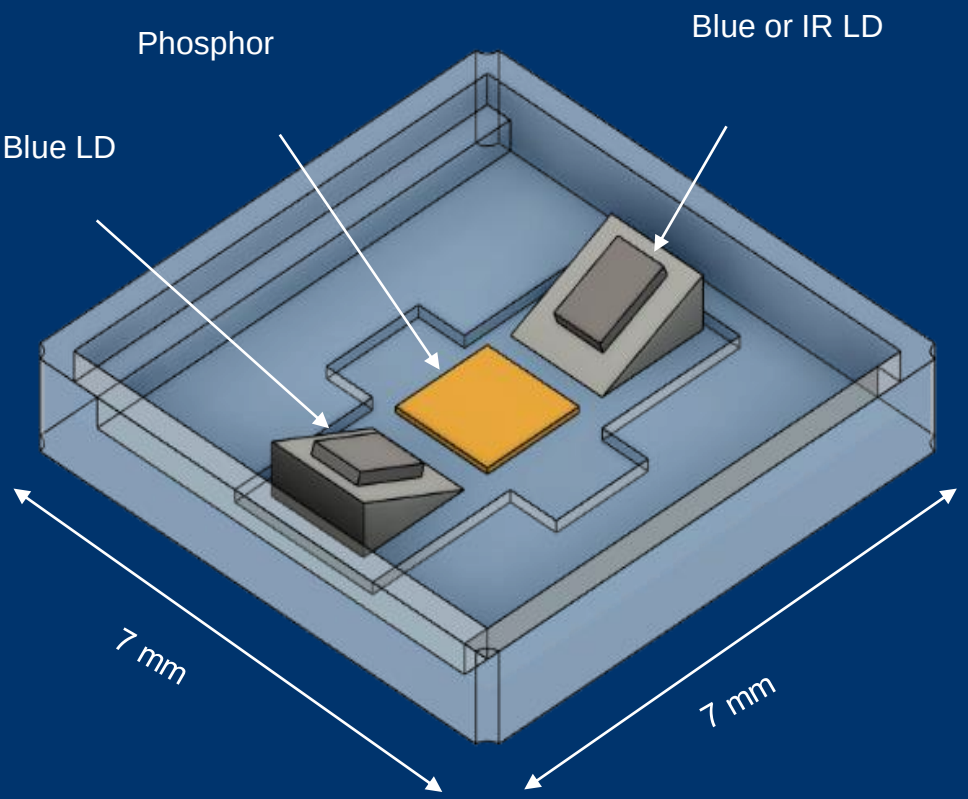
But what is LaserLight?

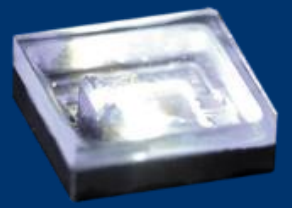
Blue LDs illuminate a phosphor to produce:

- incoherent light
- high brightness

A blue LD and IR LD yield:

- visible and IR output
- optically aligned
- independently controlled





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LaserLight offers the best of LED and laser sources

	LED	Laser	LaserLight
Brightness/Range	✘	✔✔	✔
Safety	✔	✘	✔
Modulation Speed	✘	✔	✔
Visible & IR Output	✘	✘	✔
SWaP	✘	✔	✔

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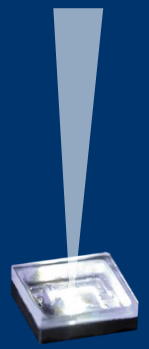
LaserLight comes in various different formats:

MicroSpot
Highly collimated miniature lightsource



LaserLight-SMD
Direct emitting device

FiberLight
Side emitting fiber

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So what *can* you imagine doing with LaserLight?

- Illumination
- Sensing
- Communications

Illumination with LaserLight – Lighting

- HID or better brightness
- SWaP optimized
- Semicondutor reliability
- Eye safe
- Modulation
- Shaping

Flashlights and other man portable illuminators

Illumination with LaserLight – Lighting

- HID or better brightness
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Vehicle headlamps

Illumination with LaserLight – Lighting

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Helicopter searchlights

Illumination with LaserLight – Lighting

- HID or better brightness
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- Shaping

Drone spotlights

Illumination with LaserLight – Lighting

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- Shaping

Blue optimized output available for underwater

Illumination with LaserLight – Lighting

- HID or better brightness
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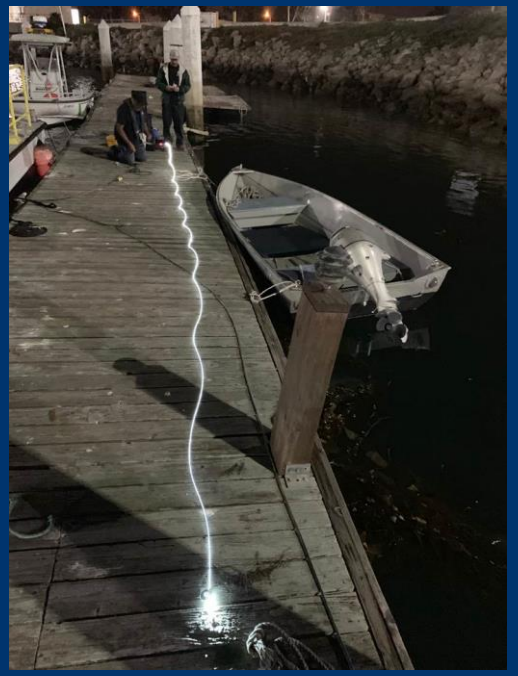
Beacons

Illumination with LaserLight – Lighting

- Easily deployed
- Durable and reusable
- Visible or IR



Landing strips and pathways

Illumination with LaserLight – Night vision illuminators

- High brightness
- Long range
- SWaP optimized
- IR only to avoid detection
- Visible when needed for illumination

Night vision

Illumination with LaserLight – Dazzlers

- Eye safe
- Broadband/hard to block
- Strobe
- SWaP optimized

Dazzlers

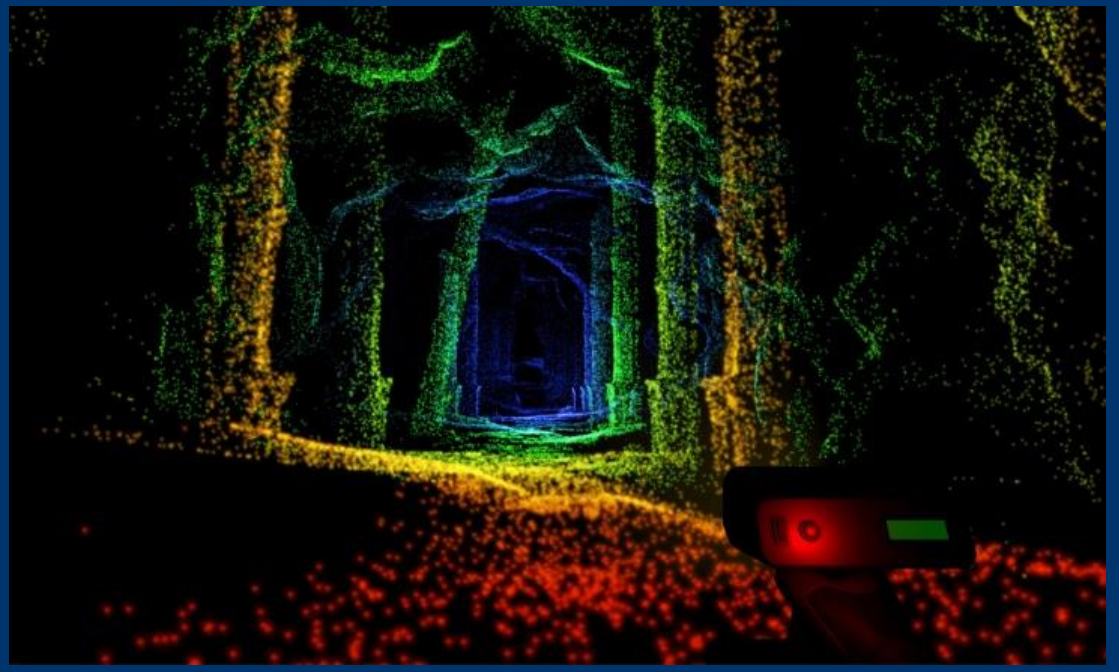
Sensing with LaserLight – Rangfinding

- Pulses 1000X faster than an LED
- Long range
- Doubles as a flashlight, headlamp or spotlight.

Rangefinder

Sensing with LaserLight – LIDAR

- Pulse in the IR with visible always on
- Can illuminate large areas
- SWaP optimized
- Flash LIDAR



Flash LIDAR

Communications with LaserLight – LiFi

- 25 Gbit/s demonstrated
- Long range point-to-point
- Broaden it to cover an enclosed area
- Slip ring LiFi

Ship-to-shore LiFi

KSLD is ready to partner

- KSLD has substantial US R&D epi and fab capability, and is the only US GaN laser fab
- KSLD has a strong export compliance program
- Kyocera is a large supplier into Defense and Government (KII and AVX, ITAR)

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Can you imagine what we can do together with LaserLight?