CATALOGUE RANGES PRESENTATION FREQUENTLY ASKED QUESTIONS

RayLED illuminators can fit all needs with ranges from 8 to 1 000 meters with angles from 5 to 180+° in both Infra-Red or White-Light projects.

See product ranges and distances available here:
http://www.rayled.com/images/range_matrix/index.html (for Infra-Red, invisible to human eyes)
http://www.rayled.com/images/range_matrix/index_wl.html (for White-Light, visible)
Distances reached for VARIOs are available in the VARIO section page and on product PDF pages.

Please find below all the details about each product ranges / series we have in our catalogue.
Note that our Infra-Red illuminators are called "RayMAX" or using "i" in their product codes for VARIO whereas White-Light illuminators are called "RayLUX" or use "w".

PRODUCT RANGES:

> STANDARD range comes with external power supply unit (PSU) to be powered between 100-240V:
INFRA-RED 100-240V (RAYMAX): http://www.rayled.com/infrared-illuminators/
WHITE-LIGHT 100-240V (RAYLUX): http://www.rayled.com/raylux-white-light-led-illuminators-100-240v/
Product with a SINGLE PANEL have a fixed angle of illumination (based on the angle of the LEDs used inside).
The 2 and 3 PANELS have "ADAPTIVE ILLUMINATION" which means that you can adapt the illumination between a "narrow" and a "wide" angle (when panels are pushed aside backwards, adding a "mechanical angle" to the fixed LED angles).
Angle possibilities depend on the angle version chosen (see distances page).

> NEW "VARIO" product range: a MULTI-ANGLE, INTERCHANGEABLE LENSING, REMOTELY CONTROLLED range has integrated PSU to be powered directly on a 12 V DC / 24 V AC:
http://www.rayled.com/vario-illuminators/
Each panel of the products part of this range provides 3 output illumination angles.
The standard pack includes the following angles (for each panel of the product):
- 10°H x 10°V circular without any lens
- 35°H x 10°V elliptical lens fitted as standard
- 60°H x 25°V elliptical lens

Additionnal Lenses 80°H x 30°V and 120°H x 50°V, optional Remote Control, Daylight Set-up Tool and optional external power supply units to convert mains into low voltage are available to buy at the bottom of the VARIO section and must be purchased separately if needed.
A single remote can control all types and quantities of VARIO.

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This is the latest product range and technology, it can have SINGLE, DOUBLE or TRIPLE panels.
As said above, 2 or 3 PANELS means you can reach more distance compared to single panel, and more important you can adapt the angle of illumination between the "narrow" and "wide" angle of the product angle version you choose.
Each panel can have identical or different lense from other panels in the same product, so you can mix short + medium + long distance lenses if needed. Distance are specific to each VARIO product, you can find them on the VARIO category page.

An IP PoE controlled version of VARIO i4/8 and w4/8 exist (both single panel) to be powered in 12 V DC / 24 V AC.
There are other dedicated products like D-ZOOM (remotely adjustable zoom from 10° to 80° in one single panel), HYBRID (ir+wl), VLK (Fully Integrated Lighting + Camera Housing), ESPRIT (for PELCO Esprit cameras)...

> OTHER CATEGORIES:

- URBAN LIGHT: WhiteLight LED lighting designed for Urban and Industrial Lighting:
http://www.rayled.com/raylux-urban-light-led-illuminators/
- HAZARDOUS AREA / ATEX + IEC EX APPROVED "SPARTAN" ILLUMINATORS:
http://www.rayled.com/hazardous-area-atex/
- SPECIALIST APPLICATIONS that gather POE, HYBRID (combination of IR and WL panels) and PTZ designed products:
http://www.rayled.com/specialist-applications/
- BRACKETS: all additional brackets to mount on poles and PTZ:
http://www.rayled.com/bracket-options/
- PSU OPTIONS: additional PSUs, PSU options, main to low voltage PSU for VARIO, PSU Modules:
http://www.rayled.com/power-supply-units-psu-and-modules/
(please precise range, version, options, angle and wavelength when ordering)
- CERTIFICATES: certificates and customs documents for abroad shipments:
http://www.rayled.com/certificates-customs-documents/

SPECIFYING THE RELEVANT ILLUMINATOR:

In order to specify the most relevant model(s) for your project, here are the few questions you need to ask yourseld / answer:
- invisible Infra-Red (RayMAX) or visible White-Light (RayLUX) ?
- distance to reach needed (from camera to target, plus additional distance to surround target with light) ?
- angle of illumination needed (usually angle must match the angle of the field of view of your camera) ?
- camera reference(s) and type (black and white / color / night mode...) ?
- camera captor used (active CCD or passive CMOS) ?
- sensitivity of your camera(s) in terms of "CCD" or "CMOS" size in inches (i.e. 1/4", 1/3", 1/2"...) ?
- project goal: cctv, lighting... ?
- conditions ?: day / night / total darkness / indoor or outdoor ?
- quantities ?

Few lines describing your project would be helpful to know the context and make sure we specify the correct versions / options.

The answers to the above questions will help to select the illuminators you need in the correct RANGE, with correct ANGLE and WAVELENGTH versions:
- RANGE ? Mainly based on power used: STANDARD 100-240V, FUSION + VARIO 12/24V, PoE...
- ANGLE ? See distances page, usually the field of view of the camera.
- WAVELENGTH ? In case of IR illuminator only (standard 850 nm is 95% of the market or covert 940 nm).

ADDITIONAL INFORMATION:

All illuminators we sell and ship will include its own proper power supply unit (external or integrated). You can buy additional ones from the PSU section. Premium have a Photocell following contact + a 12 V DC output. PRO have standard + premium features plus the possibility to plug Modules to make it evolve later.

STANDARD RayMAX/RayLUX ranges have 2.5 meters cables coming out of each back of panel, plug

them into the PSU (standard range with external PSU in 100-240V) or on direct 12/24V power source / use PoE (VARIO, FUSION or PoE with integrated PSUs).

Our products are the top quality in the CCTV industry, built and hand mounted on demand to use the latest technology SMT LEDs.
It includes inbuilt power adjust from 10 to 100%, inbuilt photocell for automatic on / off operation with adjustable sensibility, telemetry connection for remote operation...
All are IP66 weatherproof (IP67 for WARRIOR EXPLOSION PROOF), Anti-Vandalism, usable between -50 / + 50°C and under 5 YEARS WARRANTY for an expected lifetime of 10+ years.
Products include cables and dedicated power supply unit (external or integrated). All have a universal bracket to fix on walls, ceilings or plates. To buy poles or PTZ fixtures, see our bracket section.

> NOTES ON DISTANCES REACHED:
All distances on our site are given in meters for cameras using a CCD active captor type of at least 1/3" or equivalent.
Using a passive CMOS captor type and / or a smaller captor size will give you less distance.
I.E.: 1/4" CCD will give you less distance and 1/2" CCD should give you more distance, a 1/2" CMOS is usually equivalent to a 1/3" CCD.
If your camera is not sensitive enough you will have to oversize the IR illumination by selecting a superior model and / or reduce the number of images per second to compensate.

> NOTES ON WAVELENGTHS:
The 850 nm wavelength is the standard in the CCTV industry, at least **95% of the market.**
The 940 nm is mostly use for project requesting 100% covert illumination, usually for police forces or defense projects.
Both 850 nm and 940 nm IR light are invisible but using 940 nm version removes the very small red glow at the very source of the LEDs.

Note that the 940 nm version is 40% less powerful and so reaches 40% less distance compared to the 850 nm standard version. So, for 940 nm, please multiply by 0.6 the given 850 nm distances. Only use 940 nm wavelength if you know exactly what you are doing, they are usually used by military/police forces for covert operations.

We recommend to use extremely IR sensitive camera with 1/2" CCD captor for 940 nm and / or long distance illumination.