PLRF

Pocket Laser Range Finder with Compass Option

Features	Benefits
Eye-safe laser with exceptional measurement range	More points can be reached from one observation post which yields increased productivity and safety
Very small and lightweight	Increased mobility and agility
Meets military standards	Proven reliability, long service life and extremely low maintenance costs
Uses commercial batteries; consumes very little power	Lean logistics, great autonomy
Simple two button, single-handed operation	Rapid operational readiness in any situation

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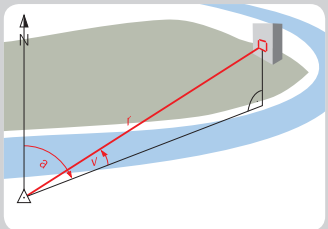
The distance meter that goes wherever you go

The Vectronix PLRF Pocket Laser Range Finder family is comprised of four variants. All of them possess brilliant optics for optimum detection, recognition and identification even under less than ideal conditions. A glass reticle with 5 mil graduation facilitates accurate pointing to small objects and permits range estimation beyond the limits of the laser. The electronic aiming mark, a red LED square, is easy to see against dark objects.

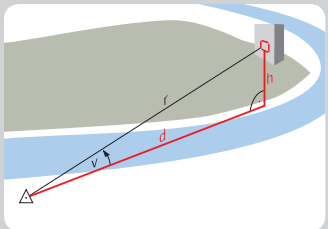
Lean and mean
PLRF10 and PLRF15 are laser range finders, pure and simple. Press a button, point at an object and read the slope distance in meters, feet or yards. The object may be as close as 5 meters and as far as two or three kilometers, across a river, high on a roof or deep down in a canyon.

C for Compass option
PLRF10C and PLRF15C are “mini laser location and orientation tools”. The C indicates their DMC Digital Magnetic Compass feature. This small addition provides a wealth of additional data: azimuth or bearing, inclination or elevation; horizontal distance and height difference – not only between the observer and an object, but also between two remote objects A and B.
Further functions are available as a software option called “Fall of Shot Correction”.

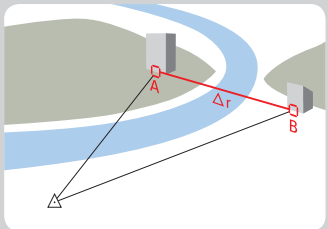
PLRF10C and 15C are much more than just rangefinders.



They measure the polar vector from the observer‘s position to the target object:
r range (slope/slant distance)
a azimuth (bearing, angle between north and object)
v vertical angle (inclination, elevation)



From the observer‘s position to a remote object they also display:
d horizontal distance
h height difference



They also display relative values between two remote objects such as:
Δr slope distance from A to B

Typical applications
Reconnaissance
Fire control
Forward air control
Rapid surveying and mapping
Gap measurement
Control of docking and underway replenishment
Peacekeeping and reconstruction
Search and rescue
Surveillance

Technical Data	PLRF10	PLRF10C	PLRF15	PLRF15C
Optics				
Magnification	6 x	6 x	6 x	6 x
Field of view	6° / 106 mil	6° / 106 mil	6° / 106 mil	6° / 106 mil
Rangefinder				
Laser diode	905 nm	905 nm	1550 nm	1550 nm
Beam divergence (typical)	0.3 x 1.5 mil	0.3 x 1.5 mil	0.5 x 2.0 mil	0.5 x 2.0 mil
Range capability	5 m to > 2500 m	5 m to > 2500 m	5 m to > 3000 m	5 m to > 3000 m
Accuracy, 1σ	± 2 m	± 2 m	± 2 m (50 m to 1500 m) ± 5 m (<50 m / >1500 m)	± 2 m (50 m to 1500 m) ± 5 m (<50 m / >1500 m)
Angle measurement	no	yes	no	yes
Orientation accuracy, 1σ		± 10 mil		± 10 mil
Vertical angle accuracy, 1σ		± 3 mil		± 3 mil
Physical				
Dimensions (w x h x l)	101 x 50 x 125 mm	101 x 65 x 125 mm	101 x 50 x 125 mm	101 x 65 x 125 mm
Weight, with batteries	620 g	670 g	620 g	670 g

Further details see technical data sheet

The RS232 interface permits the rapid, error-free data transfer of distance, azimuth and elevation to command and control systems. Computers or GPS receivers such as PLGR, DAGR and various Garmin models will automatically convert the measured polar vector into target grid coordinates.

Every PLRF is waterproof to a depth of 1 m, optionally to 10 m.

Placing the PLRF on a tripod facilitates the lasing of small, distant objects of feeble reflectivity. Measurements are released using the remote trigger on the optional data cable.

Easy one hand operation

How far can you measure?
PLRF benefits from Vectronix' proprietary know-how to measure great distances at amazingly low laser output power. How far you can actually measure in practice depends on a number of factors as illustrated in the diagram.*

*For range specifications please refer to the product technical data sheet.

Distance measurement under ideal conditions
+ Clear atmosphere, overcast sky or twilight
+ Good reflectivity of target object (smooth, bright wall)
+ Target surface roughly perpendicular to laser beam
+ Steady hold or support (to ensure that the laser beam will not miss the target)
+ Large object (>2.3 m x 2.3 m)

Distance measurement under poor conditions
– Snow, fog, rain, dust, high humidity, heat
– Small object (does not "capture" and reflect the whole laser beam)
– Difficult object (dark, uneven, gaping such as a leafless tree)

PLRF uses standard 3 V lithium batteries, type CR123A. One pair lasts for over 10.000 measurements in the basic PLRF and over 5.000 measurements in the PLRF with compass.

All range finders measure perfectly well in the dark, provided the target object is visible. For that purpose an image intensifier such as the Vectronix BIM25 Night Pocketscope can be fitted to the eyepiece of the PLRF. Both devices can rapidly be joined or used separately as required.

Users concerned about being detectable while lasing a target prefer the PLRF15 or PLRF15C. Their 1550 nm wavelength is invisible for night vision devices and thus contributes to the safety of the operators.

PLRF15C with data cable for PC on SST3-3 mini-tripod/monopod.

LASER CLASS 1
Eye-safe
in accordance with
IEC 60825-1 Ed 1.2 (2001-08)

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