1535 nm

LASER RANGEFINDER MODULES



PRODUCT CATALOG | SEPTEMBER 2026 | ERDI TECH LTD

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Cover image: LRF0305C. LRF0305C product view from the model-specific source.

About this catalog

This catalog presents ERDI 1535 nm laser rangefinder modules by model. Ranging distance depends on the specified target and environmental conditions. Model-level tables retain those conditions alongside the principal specifications.

How to read the specifications

Each entry belongs to the exact model named at the top of the page. A range, pulse energy or safety statement for one model does not apply to another model.

Read maximum range together with target size, reflectivity, visibility and any other stated test conditions. Values described as typical, minimum or maximum retain that meaning.

TBC indicates that a value or supplied configuration requires confirmation. Where documents disagree, the affected entry carries a note rather than silently combining different versions.

Product illustrations identify the source document and are not dimensional drawings. Confirm mounting geometry using the controlled drawing for the supplied configuration.

This is a catalog of key specifications. The individual manual remains necessary for installation, electrical limits, handling and safety. Never infer system-level eye safety from wavelength alone.

Range figures apply only to the stated target sizes, reflectance, visibility and humidity. They are not unconditional maximum distances.

TBC means engineering confirmation is required. This selection guide does not replace the approved operating manual, wiring instructions or installation drawing.

Images reproduce the corresponding model's source material without generated enhancement. Some sources share illustrations; LRF1830C includes a composited background. Images do not establish mounting dimensions or final configuration.

Specifications are source-stated, not independently certified test results. Confirm applicable laser-safety requirements, ordered configuration and qualification evidence before integration.

Product documents and contact

Use the links on each model page to view its product record and supporting documentation. For a technical inquiry, include the exact model, required quantity, application conditions and the parameter you need confirmed.

erdilrf.com

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Model directory

Laser rangefinder modules

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Each model entry includes key specifications, conditions and its document reference.

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Laser rangefinder modules

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Each model entry includes key specifications, conditions and its document reference.

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LRF0105C



LRF0105C product view from the model-specific source.

A compact cylindrical ranging module with a 3-5 V supply, 3.3 V TTL control and selectable single-shot or continuous operation.

Parameter	Specification
Wavelength	1535 ± 5 nm
Range and target conditions	Visibility ≥6 km: building ≥4000 m at 60% reflectance (building size not stated); 2.3 × 2.3 m target ≥3000 m, 0.5 × 1.7 m target ≥1500 m and 0.2 × 0.3 m target ≥800 m, each at 30% reflectance.
Minimum range (source upper bound)	≤15 m
Ranging accuracy / resolution	±2 m; range resolution ≤0.1 m
Ranging rate	Single-shot, 1 Hz, 5 Hz, 10 Hz
Beam divergence	≤1 mrad
Laser pulse energy	≥100 µJ
Supply voltage	DC 3-5 V
Communication interface	UART, 3.3 V TTL
Power consumption	Average ≤0.8 W; peak ≤1.5 W; standby ≤1 mW
Dimensions	Ø34 × 47.5 mm
Weight	Source notation: ≤29 ± 1 g; acceptance limit requires clarification
Temperature	Operating -40 to +70 °C; storage -55 to +75 °C

The building range uses 60% reflectance; the three smaller targets use 30%. All ranges require visibility ≥6 km.

The source weight notation, ≤29 ± 1 g, requires confirmation of the nominal value and maximum acceptance limit.

Reference: LRF0105C.pdf, pages 1, 2, 3.

View LRF0105C product and documentation

LRF0305C



LRF0305C product view from the model-specific source.

A miniature 3-5 V ranging module with 3.3 V TTL UART and 1-10 Hz operation.

Parameter	Specification
Wavelength	1535 ± 5 nm
Range and target conditions	Visibility >8 km: building ≥4000 m at 60% reflectance (size not stated); 2.3 × 2.3 m target ≥3000 m, 0.5 × 1.7 m target ≥1500 m and 0.2 × 0.3 m target ≥800 m, each at 30% reflectance.
Minimum range (source upper bound)	≤10 m
Ranging accuracy / resolution	±1 m
Ranging rate	1-10 Hz
Beam divergence	≤0.6 mrad
Laser pulse energy	≥100 µJ
Supply voltage	DC 3-5 V
Communication interface	UART, 3.3 V TTL
Power consumption	At 5 V: operating ≤0.9 W at 1 Hz and <1.5 W at 10 Hz; peak <3 W. Standby ≤10 mW with Power_on low; ≤0.8 W with Power_on high.
Dimensions	≤27 × 25 × 15.5 mm
Weight	Source notation: ≤14 ± 1 g; acceptance limit requires clarification
Temperature	Operating -40 to +70 °C; storage -45 to +70 °C

This is the 10 Hz variant, not LRF0306C. Range conditions require visibility >8 km, with 60% building reflectance and 30% for smaller targets.

The source weight notation, ≤14 ± 1 g, requires confirmation of the nominal value and maximum acceptance limit.

Reference: LRF0305C.pdf, pages 1, 2, 3.

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LRF0306C



LRF0306C product view from the model-specific source.

A miniature 3-5 V ranging module with 3.3 V TTL UART and 1-3 Hz operation.

Parameter	Specification
Wavelength	1535 ± 5 nm
Range and target conditions	Visibility >8 km: building ≥4000 m at 60% reflectance (size not stated); 2.3 × 2.3 m target ≥3000 m, 0.5 × 1.7 m target ≥1500 m and 0.2 × 0.3 m target ≥800 m, each at 30% reflectance.
Minimum range (source upper bound)	≤10 m
Ranging accuracy / resolution	±1 m
Ranging rate	1-3 Hz
Beam divergence	≤0.6 mrad
Laser pulse energy	≥100 µJ
Supply voltage	DC 3-5 V
Communication interface	UART, 3.3 V TTL
Power consumption	At 5 V: operating ≤0.9 W at 1 Hz and <1.1 W at 3 Hz; peak ≤3 W. Standby ≤10 mW with Power_on low; ≤0.8 W with Power_on high.
Dimensions	≤27 × 25 × 15.5 mm
Weight	Source notation: ≤14 ± 1 g; acceptance limit requires clarification
Temperature	Operating -40 to +70 °C; storage -45 to +70 °C

This is the 3 Hz variant; 10 Hz operation is not specified. Range conditions require visibility >8 km, with 60% building reflectance and 30% for smaller targets.

The source weight notation, ≤14 ± 1 g, requires confirmation of the nominal value and maximum acceptance limit.

Reference: LRF0306C-3HZ.pdf, pages 1, 2, 3.

View LRF0306C product and documentation

LRF0308C



LRF0308C product view from the model-specific source.

A compact TTL UART ranging module supporting single-shot and 1-10 Hz operation.

Parameter	Specification
Wavelength	1535 ± 5 nm
Range and target conditions	30% reflectance and visibility ≥5 km: 2.3 × 2.3 m NATO target ≥3000 m; 0.5 × 1.7 m human-size target ≥1200 m.
Minimum range (source upper bound)	≤15 m
Ranging accuracy / resolution	±2 m; range resolution ≤0.1 m
Ranging rate	Single-shot, 1-10 Hz
Beam divergence	≤0.6 mrad
Laser pulse energy	≥100 µJ
Supply voltage	TBC: specification table lists DC 3-5 V; power-pin definition lists 4.5-16 V
Communication interface	UART, 3.3 V TTL
Power consumption	Average ≤2.5 W at 10 Hz; peak ≤7 W at 12 V. The 12 V condition conflicts with the 3-5 V specification row.
Dimensions	48 × 30.5 × 21 mm
Weight	Source notation: ≤32 ± 1 g; acceptance limit requires clarification
Temperature	Operating -40 to +70 °C; storage -55 to +75 °C

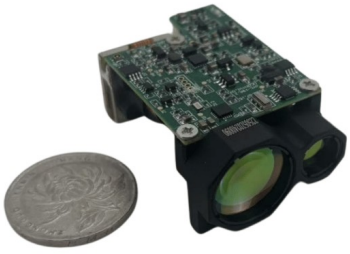
Not currently listed online; this entry provides source information for model confirmation. Availability and final configuration require confirmation.

Supply voltage remains TBC: the specification says 3-5 V, the pin definition says 4.5-16 V, and peak power is specified at 12 V. Confirm supply and connector before wiring.

The source weight notation, ≤32 ± 1 g, requires clarification of the maximum acceptance limit.

Reference: LRF0308C.pdf, pages 1, 2, 3.

LRF0310C



LRF0310C product view from the model-specific source.

A compact 4.5-16 V ranging module with 3.3 V TTL UART and single-shot or 1-10 Hz operation.

Parameter	Specification
Wavelength	1535 ± 5 nm
Range and target conditions	Visibility ≥5 km: building ≥4000 m at 60% reflectance (size not stated); 2.3 × 2.3 m target ≥3000 m, 0.5 × 1.7 m target ≥1500 m and 0.2 × 0.3 m target ≥800 m, each at 30% reflectance.
Minimum range (source upper bound)	≤15 m
Ranging accuracy / resolution	±1 m; range resolution ≤0.1 m
Ranging rate	Single-shot, 1-10 Hz
Beam divergence	≤0.6 mrad
Laser pulse energy	≥100 µJ
Supply voltage	DC 4.5-16 V
Communication interface	UART, 3.3 V TTL
Power consumption	Average ≤1.5 W at 1 Hz; peak ≤7 W at 12 V; standby ≤0.6 W
Dimensions	48 × 30.5 × 21 mm
Weight	Source notation: ≤32 ± 1 g; acceptance limit requires clarification
Temperature	Operating -40 to +70 °C; storage -55 to +75 °C

The source repeats UART_TX for two pins. Confirm the approved TX/RX pinout before wiring.

The building range uses 60% reflectance; smaller targets use 30%. All ranges require visibility ≥5 km.

The source weight notation, ≤32 ± 1 g, requires confirmation of the nominal value and maximum acceptance limit.

Reference: LRF0310C.pdf, pages 1, 2, 3.

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LRF0405C



LRF0405C product view from the model-specific source.

A compact TTL UART ranging module supporting single-shot and 1-10 Hz operation.

Parameter	Specification
Wavelength	1535 ± 5 nm
Range and target conditions	30% reflectance and visibility ≥6 km: 2.3 × 2.3 m NATO target ≥4000 m; 0.5 × 1.7 m human-size target ≥1200 m.
Minimum range (source upper bound)	≤15 m
Ranging accuracy / resolution	±2 m; range resolution ≤0.1 m
Ranging rate	Single-shot, 1-10 Hz
Beam divergence	≤0.6 mrad
Laser pulse energy	≥200 µJ
Supply voltage	TBC: specification table lists DC 3-5 V; power-pin definition lists 4.5-16 V
Communication interface	UART, 3.3 V TTL
Power consumption	Average ≤2.5 W at 10 Hz; peak ≤7 W at 12 V. The 12 V condition conflicts with the 3-5 V specification row.
Dimensions	48 × 30.5 × 21 mm
Weight	Source notation: ≤32 ± 1 g; acceptance limit requires clarification
Temperature	Operating -40 to +70 °C; storage -55 to +75 °C

Supply voltage remains TBC: the specification says 3-5 V, the pin definition says 4.5-16 V, and peak power is specified at 12 V. Confirm the approved supply before wiring.

The source weight notation, ≤32 ± 1 g, requires confirmation of the nominal value and maximum acceptance limit.

Reference: LRF0405C.pdf, pages 1, 2, 3.

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LRF0609C



LRF0609C product view from the model-specific source.

A 4.5-16 V TTL UART ranging module with selectable single-shot and discrete continuous-ranging rates.

Parameter	Specification
Wavelength	1535 ± 10 nm
Range and target conditions	Vehicle target 2.3 × 4.6 m: ≥6000 m with visibility ≥12 km, relative humidity ≤60%, and a 30% reflective panel or equivalent target.
Minimum range (source upper bound)	≤20 m
Ranging accuracy / resolution	≤±2 m; the separately listed range-resolution value requires confirmation
Ranging rate	Single-shot; 1, 2, 3, 4, 5 or 10 Hz
Beam divergence	≤0.5 mrad
Laser pulse energy	Not stated in the reviewed source specifications
Supply voltage	DC 4.5-16 V
Communication interface	UART, 3.3 V TTL
Power consumption	Average ≤1.5 W; standby ≤0.3 W; operating condition not stated
Dimensions	≤55 × 48 × 32 mm
Weight	≤62 g
Temperature	Operating -40 to +60 °C; storage -50 to +70 °C

The source lists range resolution as ≤38 m. Its meaning requires clarification; it is not interpreted as 0.1 m resolution.

The 6 km range requires a 2.3 × 4.6 m vehicle target, 30% reflectance or equivalent, visibility ≥12 km and relative humidity ≤60%.

Temperature limits carry system-qualification wording; component-only qualification evidence has not been supplied.

Reference: LRF0609C.pdf, pages 1, 2, 3.

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LRF0610C



LRF0610C product view from the model-specific source.

A 12 V ranging module with selectable TTL or RS-422 configurations and 0.5-10 Hz operation.

Parameter	Specification
Wavelength	1535 ± 5 nm
Range and target conditions	30% reflectance and visibility ≥8 km: 2.3 × 2.3 m NATO target ≥6000 m; 0.5 × 1.7 m human-size target ≥1500 m.
Minimum range (source upper bound)	≤15 m
Ranging accuracy / resolution	±2 m; range resolution ≤0.1 m
Ranging rate	0.5-10 Hz
Beam divergence	≤0.5 mrad
Laser pulse energy	≥200 µJ
Supply voltage	DC 12 V; verify the conflicting RS-422 connector labels before wiring
Communication interface	Selectable TTL (3.3 V logic, Molex 51021-0500) or RS-422 (J30J); confirm ordered variant
Power consumption	Average ≤2.5 W at 10 Hz; peak ≤7 W at 12 V; standby ≤1 mW
Dimensions	70 × 32 × 40 mm
Weight	≤90 g
Temperature	Operating -40 to +70 °C; storage -55 to +75 °C

The RS-422 pin label says VCC 5V, but its function and supply specification say 12 V. Obtain the approved pinout before wiring.

TTL and RS-422 are selectable configurations; confirm the required interface when specifying the module.

Reference: LRF0610C.pdf, pages 1, 2, 3.

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LRF0612C



LRF0612C product view from the model-specific source.

A compact 4.5-16 V TTL UART ranging module with 1-10 Hz operation.

Parameter	Specification
Wavelength	1535 ± 5 nm
Range and target conditions	30% reflectance and visibility ≥8 km: 2.3 × 2.3 m NATO target ≥6000 m; 0.5 × 1.7 m human-size target ≥1200 m.
Minimum range (source upper bound)	≤50 m
Ranging accuracy / resolution	±2 m; range resolution ≤0.1 m
Ranging rate	1-10 Hz
Beam divergence	≤0.3 mrad
Laser pulse energy	≥200 µJ
Supply voltage	DC 4.5-16 V
Communication interface	UART, 3.3 V TTL
Power consumption	Average ≤4 W (source leaves the '@' condition blank); peak ≤14 W at 12 V; standby ≤1 mW
Dimensions	65 × 48 × 32 mm
Weight	Source notation: ≤58 ± 1 g; acceptance limit requires clarification
Temperature	Operating -40 to +70 °C; storage -55 to +75 °C

The ≤4 W average-power entry omits its operating condition. No frequency or temperature condition should be assumed.

The source weight notation, ≤58 ± 1 g, requires confirmation of the nominal value and maximum acceptance limit.

Reference: LRF0612C.pdf, pages 1, 2, 3.

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LRF0815C



LRF0815C product view from the model-specific source.

A 12 V ranging module with selectable TTL or RS-422 configurations and 0.5-10 Hz operation.

Parameter	Specification
Wavelength	1535 ± 5 nm
Range and target conditions	2.3 × 2.3 m NATO target ≥8000 m at 30% reflectance and visibility ≥10 km.
Minimum range (source upper bound)	≤15 m
Ranging accuracy / resolution	±2 m; range resolution ≤0.1 m
Ranging rate	0.5-10 Hz
Beam divergence	≤0.3 mrad
Laser pulse energy	≥300 µJ
Supply voltage	DC 12 V; verify the conflicting RS-422 connector labels before wiring
Communication interface	Selectable TTL (3.3 V logic) or RS-422; confirm ordered variant
Power consumption	Average ≤2 W (condition not stated); peak ≤3 W at 10 Hz; standby ≤1.2 W
Dimensions	65 × 46 × 86 mm
Weight	≤175 g
Temperature	Operating -40 to +70 °C; storage -55 to +75 °C

The RS-422 pin label says VCC 5V, but its function and supply specification say 12 V. Confirm the interface configuration and approved pinout before wiring.

The ≤2 W average-power entry has no stated operating condition; the ≤3 W peak figure is specified at 10 Hz.

Reference: LRF0815C.pdf, pages 1, 2, 3.

View LRF0815C product and documentation

LRF0816C



LRF0816C product view from the model-specific source.

A compact 4.5-16 V TTL UART ranging module with 1-10 Hz operation.

Parameter	Specification
Wavelength	1535 ± 5 nm
Range and target conditions	30% reflectance and visibility ≥10 km: 2.3 × 2.3 m NATO target ≥8000 m; 0.5 × 1.7 m human-size target ≥1500 m.
Minimum range (source upper bound)	≤50 m
Ranging accuracy / resolution	±2 m; range resolution ≤0.1 m
Ranging rate	1-10 Hz
Beam divergence	≤0.3 mrad
Laser pulse energy	≥300 µJ
Supply voltage	DC 4.5-16 V
Communication interface	UART, 3.3 V TTL
Power consumption	Average ≤4 W (source leaves the '@' condition blank); peak ≤14 W at 12 V; standby ≤1 mW
Dimensions	65 × 48 × 32 mm
Weight	Source notation: ≤58 ± 1 g; acceptance limit requires clarification
Temperature	Operating -40 to +70 °C; storage -55 to +75 °C

The ≤4 W average-power entry omits its operating condition. No frequency or temperature condition should be assumed.

The source weight notation, ≤58 ± 1 g, requires confirmation of the nominal value and maximum acceptance limit.

Reference: LRF0816C.pdf, pages 1, 2, 3.

View LRF0816C product and documentation

LRF0818C



LRF0818C product view from the model-specific source.

A compact 4.5-16 V TTL UART module with discrete ranging rates, first/last-target selection and range-gate functions.

Parameter	Specification
Wavelength	1535 ± 10 nm
Range and target conditions	Visibility ≥12 km, relative humidity ≤60%, and 30% reflective panel or equivalent: 2.3 × 4.6 m vehicle target ≥8000 m. Human-size 0.5 × 1.7 m ≥4500 m and UAV-size 0.2 × 0.3 m ≥2600 m are expressly identified as design guarantees, not supplied acceptance-test results.
Minimum range (source upper bound)	≤20 m
Ranging accuracy / resolution	≤±2 m
Ranging rate	Single-shot; 1, 2, 3, 4, 5 or 10 Hz
Beam divergence	≤0.4 mrad
Laser pulse energy	Not stated in the reviewed source specifications
Supply voltage	DC 4.5-16 V
Communication interface	UART, 3.3 V TTL
Power consumption	Operating ≤4 W; peak ≤14 W at 12 V; standby ≤1 mW
Dimensions	≤59.5 × 26 × 32 mm
Weight	≤65 g
Temperature	Operating -40 to +60 °C; storage -50 to +70 °C

The 4.5 km human-target and 2.6 km small-UAV-target values are source design guarantees, not supplied acceptance-test results. Their stated target sizes, reflectance, visibility and humidity conditions remain applicable.

Temperature limits carry system-qualification wording; component-only qualification evidence has not been supplied.

Reference: LRF0818C.pdf, pages 1, 2, 3.

View LRF0818C product and documentation

LRF1017C



LRF1017C product view from the model-specific source.

A 12 V ranging module with selectable TTL or RS-422 configurations and 0.5-10 Hz operation.

Parameter	Specification
Wavelength	1.54 ± 0.02 µm (source wording; equivalent to 1540 ± 20 nm)
Range and target conditions	2.3 × 2.3 m NATO target ≥10 km at 30% reflectance and visibility ≥12 km.
Minimum range (source upper bound)	≤50 m
Ranging accuracy / resolution	±2 m; range resolution ≤0.1 m
Ranging rate	0.5-10 Hz
Beam divergence	≤0.3 mrad
Laser pulse energy	≥300 µJ
Supply voltage	DC 12 V; verify the conflicting RS-422 connector labels before wiring
Communication interface	Selectable TTL (3.3 V logic) or RS-422; confirm ordered variant
Power consumption	Average ≤2 W; peak ≤3 W at 10 Hz; standby ≤1.2 W
Dimensions	107 × 62 × 72 mm
Weight	≤275 g
Temperature	Operating -40 to +70 °C; storage -55 to +75 °C

The source specifies 1.54 ± 0.02 µm; the 1535 nm family label does not replace this wavelength tolerance.

The RS-422 pin label says VCC 5V, but its function and supply specification say 12 V. Confirm the approved pinout before wiring.

The multi-target-count row contains RS422 rather than a count. Target count requires separate confirmation.

Reference: LRF1017C.pdf, pages 1, 2, 3.

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LRF1221C



LRF1221C product view from the model-specific source.

A 12 V ranging module with selectable TTL or RS-422 configurations and 0.5-10 Hz operation.

Parameter	Specification
Wavelength	1.54 ± 0.02 µm (source wording; equivalent to 1540 ± 20 nm)
Range and target conditions	4 × 6 m target ≥12 km at 30% reflectance and visibility ≥15 km.
Minimum range (source upper bound)	≤50 m
Ranging accuracy / resolution	±2 m; range resolution ≤0.1 m
Ranging rate	0.5-10 Hz
Beam divergence	≤0.3 mrad
Laser pulse energy	≥300 µJ
Supply voltage	DC 12 V; verify the conflicting RS-422 connector labels before wiring
Communication interface	Specification table: RS-422; interface section: selectable TTL (3.3 V) or RS-422. Confirm ordered variant.
Power consumption	Average ≤2 W; peak ≤3 W at 10 Hz; standby ≤1.2 W
Dimensions	107 × 62 × 72 mm
Weight	≤275 g
Temperature	Operating -40 to +70 °C; storage -55 to +75 °C

The 12 km result uses a 4 × 6 m target at 30% reflectance and visibility ≥15 km, not a 2.3 × 2.3 m target.

The RS-422 pin label says VCC 5V, but its function and supply specification say 12 V. Confirm the interface variant and approved pinout before wiring.

The source specifies 1.54 ± 0.02 µm; preserve this wavelength tolerance rather than substituting the family label.

Reference: LRF1221C.pdf, pages 1, 2, 3.

View LRF1221C product and documentation

LRF1222C



LRF1222C product view from the model-specific source.

A cylindrical 12 V ranging module with selectable TTL or RS-422 configurations and 0.5-10 Hz operation.

Parameter	Specification
Wavelength	1.54 ± 0.02 µm (source wording; equivalent to 1540 ± 20 nm)
Range and target conditions	2.3 × 2.3 m NATO target ≥12 km at 30% reflectance and visibility ≥12 km.
Minimum range (source upper bound)	≤40 m
Ranging accuracy / resolution	±2 m; range resolution ≤0.1 m
Ranging rate	0.5-10 Hz
Beam divergence	≤0.3 mrad
Laser pulse energy	≥300 µJ
Supply voltage	DC 12 V; verify the conflicting RS-422 connector labels before wiring
Communication interface	Selectable TTL (3.3 V logic) or RS-422; confirm ordered variant
Power consumption	Average ≤2 W; peak ≤3 W at 10 Hz; standby ≤1.2 W
Dimensions	Source body size Ø58 × 134 mm; mounting protrusions are not included in this shorthand
Weight	≤335 g
Temperature	Operating -40 to +70 °C; storage -55 to +75 °C

Ø58 × 134 mm describes the stated body size, not the full mounting envelope. Obtain the installation drawing before enclosure design.

The RS-422 pin label says VCC 5V, but its function and supply specification say 12 V. Confirm the approved pinout before wiring.

The multi-target-count row contains RS422 rather than a count. Target count requires separate confirmation.

Reference: LRF1222C.pdf, pages 1, 2, 3.

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LRF1525C



LRF1525C product view from the model-specific source.

A 12 V ranging module with selectable TTL or RS-422 configurations and 0.5-10 Hz operation.

Parameter	Specification
Wavelength	1.54 ± 0.02 µm (source wording; equivalent to 1540 ± 20 nm)
Range and target conditions	4 × 6 m target ≥15 km at 30% reflectance and visibility ≥18 km.
Minimum range (source upper bound)	≤50 m
Ranging accuracy / resolution	±2 m; range resolution ≤0.1 m
Ranging rate	0.5-10 Hz
Beam divergence	≤0.3 mrad
Laser pulse energy	≥500 µJ
Supply voltage	DC 12 V; verify the conflicting RS-422 connector labels before wiring
Communication interface	Specification table: RS-422; interface section: selectable TTL (3.3 V) or RS-422. Confirm ordered variant.
Power consumption	Average ≤2 W; peak ≤3 W; standby ≤1.2 W; peak-power test condition not stated
Dimensions	125 × 85 × 58.5 mm
Weight	≤400 g
Temperature	Operating -40 to +70 °C; storage -55 to +75 °C

The 15 km result requires a 4 × 6 m target at 30% reflectance and visibility ≥18 km.

The RS-422 pin label says VCC 5V, but its function and supply specification say 12 V. Confirm the approved pinout before wiring.

The peak-power entry has no stated test condition; do not assume a frequency or temperature condition.

Reference: LRF1525C.pdf, pages 1, 2, 3.

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LRF1829C



LRF1829C product view from the model-specific source.

A 12 V TTL / RS-422 module for condition-qualified long-distance ranging at 0.5-10 Hz.

Parameter	Specification
Wavelength	1535 ± 5 nm (source writes the tolerance as ±0.005 µm)
Range and target conditions	Line of sight, relative humidity ≤50% at 30 °C: 3 × 3 m vehicle target ≥18,000 m with visibility ≥26 km; 6 × 6 m diffuse target ≥23,000 m with reflectance ≥30% and visibility ≥30 km. The table heading states 30% reflectance; retain the stronger detailed visibility conditions.
Minimum range (source upper bound)	≤50 m
Ranging accuracy / resolution	±2 m; range resolution ≤0.1 m
Ranging rate	0.5-10 Hz
Beam divergence	≤0.3 mrad
Laser pulse energy	≥500 µJ
Supply voltage	DC 12 V; verify the conflicting RS-422 connector labels before wiring
Communication interface	Selectable TTL (3.3 V logic) or RS-422; confirm ordered variant
Power consumption	Average ≤2 W; peak ≤3 W; standby ≤1.2 W; peak-power test condition not stated
Dimensions	125 × 100 × 72 mm
Weight	≤400 g
Temperature	Operating -40 to +70 °C; storage -55 to +75 °C

The 18 km and 23 km range clauses require visibility ≥26 km and ≥30 km respectively, not merely the heading's ≥18 km. Stated target sizes, reflectance and relative humidity ≤50% at 30 °C also apply.

The RS-422 pin label says VCC 5V, but its function and supply specification say 12 V. Confirm the approved pinout before wiring.

The multi-target-count row contains RS422 rather than a count. Target count and unspecified power-test conditions require confirmation.

Reference: LRF1829C.pdf, pages 1, 2, 3.

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LRF1830C



LRF1830C source illustration with composited background.

A 12 V TTL / RS-422 module for condition-qualified long-distance ranging at 0.5-10 Hz.

Parameter	Specification
Wavelength	1.54 ± 0.02 µm (source wording; equivalent to 1540 ± 20 nm)
Range and target conditions	Line of sight, relative humidity ≤50% at 30 °C: 3 × 3 m vehicle target ≥18,000 m with visibility ≥26 km; 6 × 6 m diffuse target ≥23,000 m with reflectance ≥30% and visibility ≥30 km. The table heading states 30% reflectance; retain the stronger detailed visibility conditions.
Minimum range (source upper bound)	≤50 m
Ranging accuracy / resolution	±2 m; range resolution ≤0.1 m
Ranging rate	0.5-10 Hz
Beam divergence	≤0.3 mrad
Laser pulse energy	≥500 µJ
Supply voltage	DC 12 V; verify the conflicting RS-422 connector labels before wiring
Communication interface	Selectable TTL (3.3 V logic) or RS-422; confirm ordered variant
Power consumption	Average ≤2 W; peak ≤3 W; standby ≤1.2 W; peak-power test condition not stated
Dimensions	125 × 100 × 70 mm
Weight	≤400 g
Temperature	Operating -40 to +70 °C; storage -55 to +75 °C

The 18 km and 23 km range clauses require visibility ≥26 km and ≥30 km respectively, not merely the heading's ≥18 km. Stated target sizes, reflectance and relative humidity ≤50% at 30 °C also apply.

The RS-422 pin label says VCC 5V, but its function and supply specification say 12 V. Confirm the approved pinout before wiring.

The multi-target-count row contains RS422 rather than a count. Target count and unspecified power-test conditions require confirmation.

Reference: LRF1830C.pdf, pages 1, 2, 3.

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LRF1831C



LRF1831C product view from the model-specific source.

A 12 V TTL / RS-422 ranging module with 0.5-10 Hz operation and explicitly qualified large-target range specifications.

Parameter	Specification
Wavelength	1535 ± 5 nm (source writes the tolerance as ±0.005 µm)
Range and target conditions	Line of sight, visibility ≥15 km and relative humidity ≤80% at 30 °C: Target 1, 5 × 15 m, ≥6500 m (reflectance not stated); 20 × 20 m diffuse target ≥12,000 m at reflectance ≥30%.
Minimum range (source upper bound)	≤50 m
Ranging accuracy / resolution	±2 m; range resolution ≤0.1 m
Ranging rate	0.5-10 Hz
Beam divergence	≤1.3 mrad
Laser pulse energy	≥350 µJ
Supply voltage	DC 12 V; verify the conflicting RS-422 connector labels before wiring
Communication interface	Selectable TTL (3.3 V logic) or RS-422; confirm ordered variant
Power consumption	Average ≤2 W; peak ≤3 W; standby ≤1.2 W; peak-power test condition not stated
Dimensions	TBC: specification table and introduction give 113 × 76 × 90 mm; mechanical-figure caption gives 125 × 100 × 70 mm
Weight	≤410 g
Temperature	Operating -40 to +70 °C; storage -55 to +75 °C

Dimensions remain TBC: the specification gives 113 × 76 × 90 mm, while the drawing caption gives 125 × 100 × 70 mm.

The 12 km result requires a 20 × 20 m diffuse target with ≥30% reflectance, visibility ≥15 km and relative humidity ≤80% at 30 °C; it is not a small-UAV range.

The RS-422 VCC 5V label conflicts with the 12 V supply description. Confirm the pinout before wiring; the malformed multi-target-count row and unspecified power-test conditions also require confirmation.

Reference: LRF1831C.pdf, pages 1, 2, 3, 4.

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