

Why is the optical power meter showing a negative value



Overview

When there's loss in a fiber optic system, the measured power is less than the reference power, resulting in a negative logarithmic value and a negative dB reading on the meter. After all, lasers produce positive optical power, so how could a sensor display, for example, -5 W?

With thermopile-based laser power sensors, the answer usually lies in the temperature gradient inside the. Few meters are displaying Negative values of Following parameters although Current and Voltage values are in positive. Meter Pics are also attached for reference. 1: Energy Delivered-Received 2: Power Phase-A 3: Power Phase-B 4: Total Power Kindly advice for the rectification of this issue. For. By Mark Slutzki / March 18, 2026 English A negative reading on a laser power meter can be confusing during laser measurements.



Article Content

Why is the optical power received by the optical modem negative? It's ...

In fiber-optic communication systems, since optical signals will attenuate during transmission, the optical power at the receiving end is often much less than 1mW, so the dBm value ...

Fiber Optic Series: Understanding dB and dBm values

When there's loss in a fiber optic system, the measured power is less than the reference power, resulting in a negative logarithmic value and a negative dB reading on the meter. Despite the meter ...

Laser Power Meter Negative Reading: Why It Happens and How to ...

By Mark Slutzki / March 18, 2026 English A negative reading on a laser power meter can be confusing during laser measurements. After all, lasers produce positive optical power, so how ...

The FOA Reference For Fiber Optics

Likewise if you measure the two powers in dBm, the resulting measurement of loss will be a negative number, if you understand negative numbers.

PM8240 Negative Values of Power and Energy

If not expecting a negative power, there could be a few possible reasons, first, the CT orientation is reversed, or wires reversed. A second possibility is phase mismatch between voltage ...

What would cause a power meter to report negative vars?

When we start bringing loads online, motor loads to be exact, the vars start to go negative and the meters report a capacitive load. This seems to be the opposite of what would be expected.

Understanding dBm vs mW

In most fiber networks, the light signal is very weak — often weaker than a small flashlight. When this happens, the power meter shows a negative number in dBm. The signal has ...

Negative Power and Power Factor Readings | Accuenergy

Generation Load If users have a load that is generating energy, seeing negative power and power factor readings are correct and expected. When the current flows in the reverse direction (generating as ...

Laser Power Meter Negative Reading: Causes & Fixes Explained

Laser power meter negative reading? Discover causes like thermopile thermal imbalance, beam spillover, and how to fix measurement errors fast.

Why digital energy meter show negative reading?

This is a bidirectional power measurement application, such as a photovoltaic system, where negative power occurs whenever you generate more power than you consume.

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