

Article Overview

The PID (Product Identifier) of an optical module is a unique code assigned by the manufacturer to identify a specific model or variant of the module.

What a PID Represents

In optical modules, the PID serves as a unique identifier that distinguishes one module from another, even if they share the same form factor or interface type. It typically encodes information such as:

- o Module type (e.g., SFP, SFP+, QSFP28)
 - o Supported data rate (e.g., 10G, 25G, 100G)
 - o Wavelength or optical specification (e.g., 850 nm, 1310 nm, 1550 nm)
 - o Transmission distance (e.g., short-reach, long-reach)
 - o Vendor-specific features (e.g., temperature range, power consumption)
- The PID is often printed on the module label or accessible via network device commands when the module is plugged in.

How PID is Used

- o Inventory and Asset Management: Network administrators use the PID to track and manage optical modules in large deployments.
- o Compatibility Verification: The PID helps ensure that the module is compatible with the host device, as some devices only accept modules with specific PIDs.
- o Ordering and Replacement: When replacing or upgrading modules, the PID ensures the correct model is selected.
- o Firmware and Monitoring: Some modules allow monitoring of optical power, temperature, and other parameters; the PID helps the system recognize the module type and capabilities.

Difference from Other Identifiers

- o Vendor Part Number (VPI or P/N): Refers to the manufacturer's catalog number, which may cover multiple PIDs if minor revisions exist.
- o Serial Number (SN): Unique to each individual module for tracking and warranty purposes.
- o PID: Identifies the specific model or variant, not the individual unit. In summary, the PID is essential for identifying the exact optical module model, ensuring compatibility, and managing network hardware efficiently, especially in high-speed optical communication systems where multiple module types coexist .

This article discusses the performance metrics for optical modules and how to achieve higher transmission

speeds for

This ultra low noise laser lock PID controller is an ideal tool for applications requiring a high bandwidth PID correction such as laser

Explore the working principles, structures, and performance metrics of optical modules, essential components of

This is a variety of optical filters required for fiber-to-the-user (FTTx), optical transceiver modules, and passive optical

Get the highest quality, performance-leading optical transceivers for any network architecture. Find the transceiver model to fit your

Photovoltaic (PV) technology plays a crucial role in the transition towards a low-carbon energy system, but the potential

View the TI Optical module block diagram, product recommendations, reference designs and start designing.

An optical module is a typically hot-pluggable optical transceiver used in high-bandwidth data communications applications. Optical

Overview Manufacturing test automation is critical to reducing product costs and optical switches are at the

Some specific examples: Some optics/vendors have different ways of communicating with the host systems. Some

Hier sollte eine Beschreibung angezeigt werden, diese Seite lässt dies jedoch nicht zu.

In optical modules, PIN diodes or avalanche photodiodes (APDs) are typically used for the receiver optical subassembly. PIN diodes

Potential-induced degradation (PID) has received considerable attention in recent years due to its detrimental impact

Abstract This application note first briefly discusses the basic operation theory of a thermoelectric cooler (TEC) and its application in

This article discusses the design and implementation of a 100 G tunable laser optical module, and briefly introduces the

PID of the optical module

Potential Induced Degradation (PID) is a phenomenon which affects some PV modules with crystalline Si cells and leads to gradual

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