

Ophir Optronics Ltd.

Laser Power Meter

Quasar 7Z01300

FCC ID: V6XQSR

Operation Description

The Ophir Optronics "Quasar" device is a measurement device for measuring the power or energy of a laser. It is compatible with a wide range of Ophir standard smart-head detectors (or "heads") such as Thermopile (the most common), Photodiode or Pyroelectric heads. Within each of these groups of heads there is a large selection to choose from.

The Quasar uses a Bluetooth connection to transfer measurement data direct to a PC. It is classified as a "Class 1" Bluetooth Device.

The Quasar is marketed in two RF Power Modes:

- a. The "standard" mode with reduced RF power transmission and with a short, straight antenna;
- b. In an "Extended Range" mode, using the maximum possible RF power transmission and a longer, right-angle antenna (which in most cases will be pointing vertically for optimum reception).

The Quasar will be marketed in two configurations:

- a. As a stand-alone product, connecting to any smart-head detector. The Quasar will include rubber feet to sit directly on a table top.
- b. As part of a head + Quasar combination, where it will be piggy-back mounted on the back of an existing Ophir Thermopile type head. In this configuration, the Quasar is identical to the stand-alone product in every way, except a plastic mount is provided to connect to the Thermopile head.

In either case of RF Power Mode or configuration, the customer will be able to align the Quasar antenna in whatever direction he wants by suitably mounting it using his own equipment.

The Quasar contains the following blocks and components:

- A microcontroller chip using 6MHz clock frequency
- An analog circuit to process the signal coming from the head
- A battery pack consisting of 3x AA rechargeable NiMH batteries
- A charger circuit for charging the battery
- A power supply circuit using several switching power supplies at around 1MHz, and several linear power supplies, to provide all needed internal and external voltages
- A Reverse Polarity SMA connector to attach the Antenna
- A D-type 15-pin female connector to attach the standard Ophir heads
- A jack for connecting the 12v charger provided for charging the battery
- An on/off button (momentarily presses switches on the unit, holding down for ~ 4 seconds switches off the unit)
- A blue LED to show normal operation, and a red LED to show battery low or other warnings