

# OPTICAL LOSS TEST INSTRUMENTS ●

## TECHLITE™ Military Grade LED/LASER Test Set PX-D110M



### FEATURES

- 850nm / 1300nm LED SOURCE
- 1310nm / 1550nm LASER SOURCE
- 850nm / 1300nm / 1310nm / 1550nm METER
- REEL CONNECTOR CLEANER
- DIAMOND SC, FC, and ST ADAPTERS
- DIAMOND SMF ST-FC, ST-SC, MMF ST-SC
- CRUSH RESISTANT ALUMINUM BODIES
- ZERO REFERENCE METER w/ TUNING BAR
- LARGE CHARACTER METER DISPLAY
- 0.01dB METER RESOLUTION
- INTERCHANGEABLE METER ADAPTERS
- CONTROLLED LED CPR OPERATION
- BUILT IN QUICK CHARGER
- LAMINATED INSTRUCTION GUIDES
- SEALED WATERPROOF CARRY CASE
- TWO YEAR WARRANTY

### Application and Description

The TECHLITE™ PX-D110M test set is intended to allow technicians to perform precise optical measurements in the field. The meters, when operated in absolute power mode, are used to determine the level of optical power being emitted from a transmitter. In relative mode, the meters are used with the included source to perform fiber loss measurements or splice tuning operations.

TECHLITE™ meters and sources were designed to be rugged. As with all Photonix test instruments, the internal circuitry is housed within an aluminum extrusion with high impact rubber bumpers. This meter can be driven over with an automobile and has even been known to have survived a 24' drop onto concrete. When stored in its protective waterproof carry case (included when purchased with a light source as a test kit), the set can even be submerged several feet underwater. In addition, the instruction guide is fully laminated to make it weather resistant and virtually tear-proof.

The included TECHLITE™ PX-B220M meter features NIST traceable calibration at 4 wavelengths: 850nm, 1300nm, 1310nm, and 1550nm with measurement power levels as high as +3dBm or as low as -60dBm. The meter also features a true resolution of 0.01dB at ALL power levels thereby allowing the technician to trust measurements below -45dBm. The TECHLITE™ meter, in relative measurement mode, will store the zero reference reading for all four wavelengths independently in non-volatile memory. This allows all zero references to be taken at one time and also allows the unit to be turned off while moving between locations preserve battery life. Also in relative mode, the meters will also display a 1dB analog type deviation pointer and an un-averaged mini-display for real-time splice tuning. The TECHLITE™ meters utilize a graphic LCD screen to create unusually large and easy to read numbers as graphics to indicate power levels.

The included TECHLITE™ PX-C202M LED source offers advanced temperature and coupling stability as well as enhanced CPR performance to provide superior test accuracy. As well as the included PX-C205M LASER source, TECHLITE™ series sources offer the ability to operate one or both outputs simultaneously in either CW, 30Hz, 500Hz, or 2kHz modulation for use with leak detectors or fiber identifiers.

The units are powered by either four AA alkaline batteries or an AC wall pack with four AA NiMH cells (both the wall pack and NiMH cells are included). In addition to standard charge mode, the units feature an emergency quick charge mode that allows the user to charge the batteries in approximately 4 hours. A 20 minute auto power off feature is also switch selectable from the top panel on all units.

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### Specifications

|                           |                               |                              |                           |
|---------------------------|-------------------------------|------------------------------|---------------------------|
| <b>KIT MODEL</b>          | <b>PX-D110M</b>               |                              |                           |
| <b>LED SOURCE</b>         | <b>PX-C202M</b>               | <b>Operating Temperature</b> | 0C to 50C                 |
| Wavelength                | 850nm, 1300nm (+/-30nm)       | <b>Storage Temperature</b>   | -20C to 60C               |
| Fiber Size (maximum)      | 62.5/125                      | <b>Humidity</b>              | 10% to 90% non-condensing |
| Port Style                | ST.                           |                              |                           |
| Source Pmin               | -21dBm                        | <b>Line Power</b>            | 110/220VAC, 50-60Hz       |
| Source Stability (4hr)    | +/-0.10dB                     | <b>Battery Power</b>         | NiCd 4-AA or ALKALINE     |
| Source Stability (0-50C)  | +/-0.50dB                     | <b>Typical Battery Life</b>  | 10 Hours (typ.)           |
| Connection Stability      | +/-0.10dB                     | <b>Charge Time (Trickle)</b> | 12 Hrs (typ.)             |
| Source Bandwidth          | 35 (850nm) / 170 (1300nm)     | <b>Charge Time (Quick)</b>   | 3 Hrs (typ.)              |
| CPR* at 850nm             | 25-29dB +/- 1.0               |                              |                           |
| CPR* at 1300nm            | 21-25dB +/- 0.5               | <b>Performance Spec.</b>     | MIL-T-28800               |
| Modulation                | CW, 30Hz, 500Hz, 2kHz         |                              |                           |
| Warmup Time               | 15min.                        |                              |                           |
| <b>LASER SOURCE</b>       | <b>PX-C205M</b>               |                              |                           |
| Wavelength                | 1310nm, 1550nm (+/-30nm)      |                              |                           |
| Line Width                | 5nm                           |                              |                           |
| Port Style                | ST                            |                              |                           |
| Source Pmin (9/125)       | -10.0dBm CW                   |                              |                           |
| Source Stability (4hr)    | +/-0.10dB                     |                              |                           |
| Source Stability (0-50C)  | +/-0.75dB                     |                              |                           |
| Connection Stability      | +/-0.20dB                     |                              |                           |
| Warmup Time               | 15 min.                       |                              |                           |
| <b>POWER METER</b>        | <b>PX-B220M</b>               |                              |                           |
| Wavelength Range          | 800-1600nm                    |                              |                           |
| Calibration Points        | 850nm, 1300nm, 1310nm, 1550nm |                              |                           |
| Power Range               | +3 to -55dBm                  |                              |                           |
| Resolution                | 0.01dB                        |                              |                           |
| Accuracy (dB)             | +/-0.25                       |                              |                           |
| Linearity (+3 to -40dBm)  | +/-0.30dB                     |                              |                           |
| Linearity (-40 to -55dBm) | +/-0.50dB                     |                              |                           |
| Connection Stability      | +/-0.10dB                     |                              |                           |
| Detector                  | Ge, 2mm                       |                              |                           |
| Operation Modes           | dB, dBm, Watts                |                              |                           |
| Light Susceptibility      | 55dBm                         |                              |                           |