IMM photonics

RANGE FIBERPOINT®

ASSUMPTION

At 50 nW (equivalent to -43 dBm), the **RED LASER LIGHT** can be reliably detected when looking directly into the fiber/connector end at an ambient brightness of about 500 - 1000 lux.

At 5 nW (equivalent to -53 dBm), the **GREEN LASER LIGHT** can be reliably detected when looking directly into the fiber/connector end at an ambient brightness of about 500 - 1000 lux.

- A singlemode fiber (e.g. SMF-28) has an attenuation of about 7 dB / km at **650 nm**
- A singlemode fiber (e.g. SMF-28) has an attenuation of about 17 dB / km at **520 nm**

- A **FIBERPOINT® ET** couples approx. 350 µW into a singlemode fiber with a core diameter of 9 µm, which corresponds to approx. -4.5 dBm
- A **FIBERPOINT® 250MD** couples approx. 700 µW into a singlemode fiber with a core diameter of 9 µm, which corresponds to approx. -1.5 dBm
- A **FIBERPOINT® 250** couples approx. 700 µW into a singlemode fiber with a core diameter of 9 µm, which corresponds to approx. -1.5 dBm
- A **FIBERPOINT® 250HP** couples approx. 1700 µW into a singlemode fiber with a core diameter of 9 µm, which corresponds to approx. +2.3 dBm
- A **FIBERPOINT® ET G** couples approx. 350 µW into a singlemode fiber with a core diameter of 9 µm, which corresponds to approx. -4.5 dBm

ESTIMATION OF THE PERFORMANCE BUDGET

FIBERPOINT®
-43 dBm – (-4.5 dBm) =>38.5 dB

ET FIBERPOINT®
-43 dBm – (-1,5 dBm) => 41.5 dB

250 FIBERPOINT® ET G
-53 dBm – (-4.5 dBm) => 48.5 dB

FIBERPOINT® 250MD
-43 dBm – (+2,3 dBm) =>45.3 dB

FIBERPOINT® 250HP
-43 dBm – (+2,3 dBm) => 45.3 dB

ESTIMATION OF THE RANGE

FIBERPOINT® ET
$\frac{38.5\ \text{dB}}{7\ \text{dB/km}}$ => **approx. 5.5 km**

FIBERPOINT® 250
$\frac{41.5\ \text{dB}}{7\ \text{dB/km}}$ => **approx. 6.0 km**

FIBERPOINT® ET G
$\frac{50.0\ \text{dB}}{7\ \text{dB/km}}$ => **approx. 3.0 km**

FIBERPOINT® 250MD
$\frac{41.5\ \text{dB}}{7\ \text{dB/km}}$ => **approx. 6.0 km**

FIBERPOINT® 250HP
$\frac{45.3\ \text{dB}}{7\ \text{dB/km}}$ => **approx. 6.5 km**

WE LOOK FORWARD
to solving your challenge

Individual. Innovative. Exceptional.

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