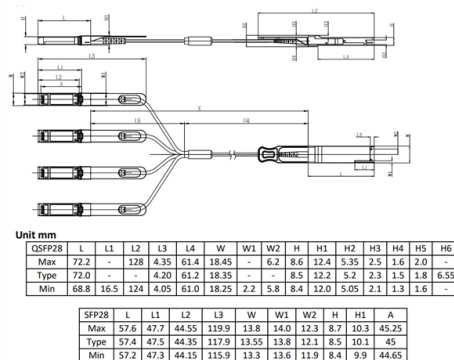


Equal Power Distribution of Optical Splitter



Overview

An Even Splitting splitter divides the optical power equally among all output ports. Key Points Insertion Loss: Theoretical loss ≈ 6 dB per port; real devices add up to ~ 7 dB due to excess loss. Optical splitters play a crucial role in Fiber to the Home (FTTH) Passive Optical Network (PON) systems, efficiently distributing a single optical signal to multiple destinations. A deeper understanding of these. Bandwidth is shared amongst customers in a PON, and the bandwidth received by a customer is not related to the power received at the optical network terminal (ONT) as long as the power is high enough so the ONT can operate. Splits are most commonly factors of 2, such as 1x2, 1x4, 1x8, 1x16, 1x32. By dividing a single optical signal from a central Optical Line Terminal (OLT) into multiple outputs for Optical Network Terminals (ONTs) at users' homes, splitters eliminate the need for dedicated fibers to each residence—slashing infrastructure costs while scaling network reach.



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For more information, pricing, or custom solutions, please contact us:

Website: <https://www.chromadecksigns-eastrand.co.za>

Email: sales@chromadecksigns-eastrand.co.za

Phone: +32 2 318 5792

Address: Avenue Louise 500, 1050 Brussels, Belgium

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