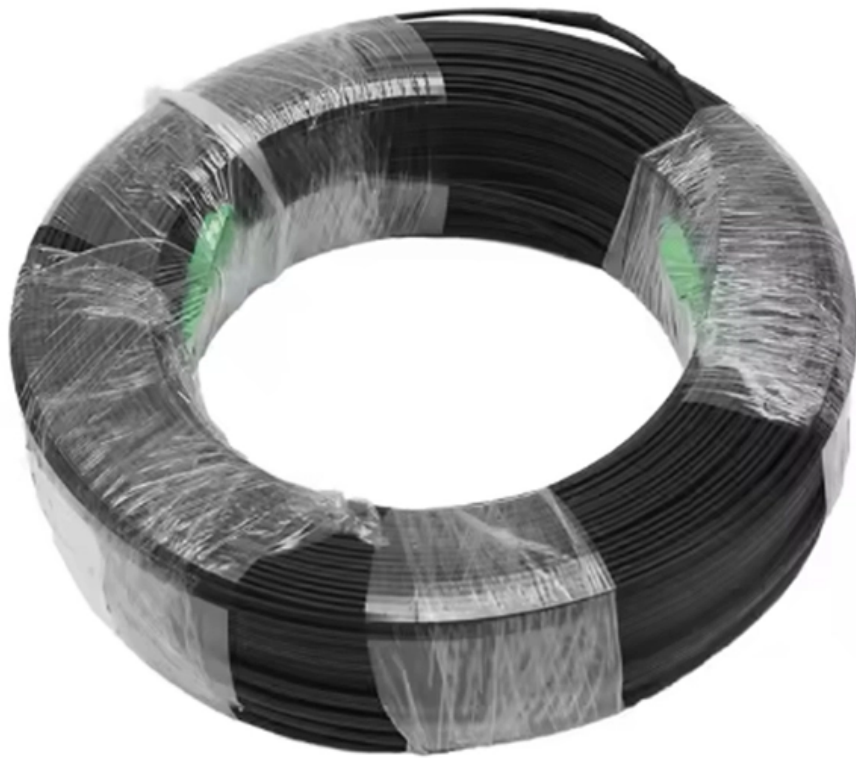


# **Customization Process for Low-Loss Optical Power Dividers in Cloud Computing**





## Customization Process for Low-Loss Optical Power Dividers in Cloud

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### Deep learning accelerated discovery of photonic power dividers

This article applies deep learning-accelerated inverse design algorithms and discovers a spectrum of photonic power dividers with exceptional performance metrics despite the simplicity in the design

### A deep learning approach for high-resolution and

In this study, the design of photonic crystal power dividers is addressed using a two-stage deep learning strategy with Deep Convolutional



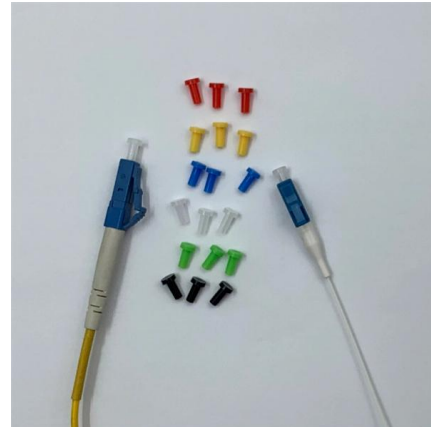
### Inverse design and characterization of compact,

Here, we use inverse design by topology optimization to devise a generic design framework for developing power splitters in any material platform,



### Inverse design and characterization of compact,

We report on the design, fabrication, and characterization of silicon power splitters and explore varying domain sizes and wavelength spans. This



### **A Compact Low-Loss On-chip N-Way Wilkinson Power Divider for mm**

This paper presents a compact N-way Wilkinson power divider using symmetric lumped sections for mm-wave applications. As a proof of concept, an 8-way Wilkinson



### **Optical NoC**

The design of WRONoCs is an optimization process that seeks to minimize electrical & optical power usage (among other metrics) while maximizing network



### **Design and Fabrication of Novel Symmetric Low-Loss 1 x 24 Optical**

Based on the three-branch structure, a compact, low-loss, and good uniformity 1 x 24 optical power splitter is designed and fabricated using silica-based PLC technology on quartz substrate.





### Multi-Way Quasi-Optical Waveguide Power Divider with 2D

In this paper, multi-way quasi-optical parallel-plate waveguide power dividers/combiners are designed and fabricated using the 2D diffraction approximation. Shape optimization technology is



### Ultra-Compact Power Splitters with Low Loss in

In this paper, we list three ultra-compact and low-loss 1 × 3 power splitters with arbitrary input and output directions. They have the same compact

### Wideband and Channel Switchable Mode Division Multiplexing (MDM)

However, traditional on-chip optical components usually support single-mode operation. In this work, we propose, fabricate and demonstrate a wideband and channel switchable MDM optical power divider



### Compact Low Loss Ribbed Asymmetric Multimode

Optical power splitters (OPSs) are utilized extensively in integrated photonic circuits, drawing significant interest in research on power splitters with



**An ultra-broadband, and low loss 3-dB optical power splitter with**

This paper proposes and demonstrates a new design for a 3-dB optical power splitter with curvature optimized adiabatic taper which can achieve ultra-broadband operation, low loss, compact,



**A Compact and Low-Loss Microstrip Filtered Power Divider for**

The filter power divider has an area of  $20 \times 21.8$  mm<sup>2</sup> and has a compact circuit integration area. Therefore, the proposed BPF designed as a power divider has the advantage of

**Ultra low loss broadband 1 x 2 optical power splitters with various**

Abstract: We designed Si-based all-dielectric 1 x 2 TE and TM power splitters with various splitting ratios and simulated them using the inverse design of adjoint and numerical 3D finite-difference time



**Data Center Networks colocation network optical circuit switch**

With support for Software-Defined Networks (SDNs), POLATIS all-optical circuit switches enable extremely low speed-of-light latency for time-critical traffic required by new virtual cloud services in



### **A low insertion loss, wideband and compact Wilkinson power divider**

In this article, a new design of a Wilkinson power divider is presented that offers substantially improved amplitude and reduced size characteristics over a broad frequency range



### **A D-Band Two-Way Differential Power Divider on 65-nm CMOS Process**

A CMOS two-way differential power divider is proposed to reduce the insertion loss (IL) and size in the D -band. The power distribution is achieved using a low-loss differential power divider with a capacitive

### **Compact filtering power divider for mm-wave applications using**

We present a compact, filtering power divider (FPD) using integrated passive device technology (IPD) for mm-wave applications. Our proposed FPD design integrates quarter



### **High-isolation and low-loss eight-way radial waveguide power divider**

A high-isolation and low-loss eight-way radial waveguide power divider (ERWPD) is proposed in this paper. The power-dividing waveguide cavity used to achieve input power division



**Seamless optical cloud computing across edge-metro network for**

This study presents an optical cloud computing system that enables long-distance, high-speed AI processing and communication with low power consumption.

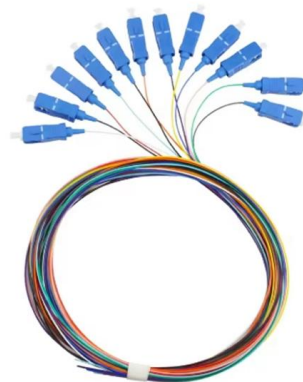


**Design of thin-film lithium niobate power splitters and**

In this paper, the design of low-loss multimode interference (MMI) couplers is reported. The proposed devices can be used as power splitters or combiners and are based on lithium niobate

**Millimeter-wave 3D-printed filtering power divider with high frequency**

Beyond the operating bands, the transmission coefficient experiences a decline of over 55 dB/GHz, demonstrating an 11th-order filtering response. The proposed filtering power divider excels



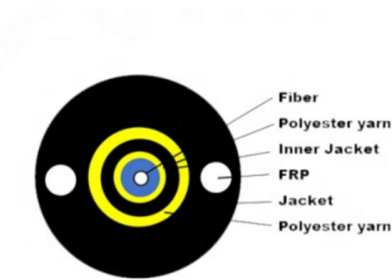
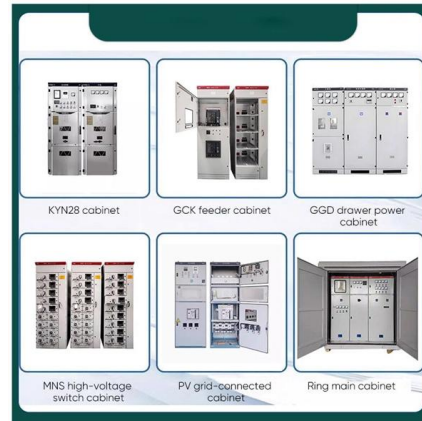
**28 GHz compact 4-way Wilkinson power divider/combiner using RCIN**

Design of low-loss coplanar transmission lines using distributed loading for millimeter-wave power divider/combiner applications in 0.18-um CMOS Technology An Ultra-wideband low-loss



### Design and validation of a miniaturized reconfigurable power divider

Reconfigurable power dividers have been widely used in power amplifiers and reconfigurable beam-forming networks. By substituting a conventional divider group with a more



### Design and Fabrication of an Ultra-Wide Band Power Divider

In this paper, a Wilkinson Power Divider (WPD) with short- and open-circuited stubs is presented. We can control the fractional bandwidth (FBW) of the power divider by radial-shaped

### Miniaturized Wideband Unequal Four-Way Filtering Power Divider

For the first time, a miniaturized wideband four-way unequal filtering power divider (FPD) based on asymmetric three-coupled lines (A-TCLs) is proposed. Two stepped-impedance resonators (SIR) are



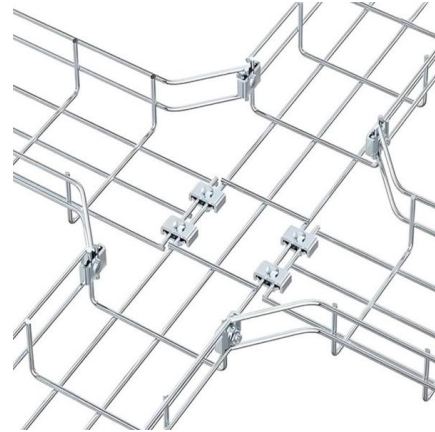
### Millimeter Wave Wideband and Low-Loss Compact Power Divider

This paper presents a wideband and low-loss design of a compact power divider based on gap waveguide technology. The proposed power divider consists of two adjacent E-plane groove gap



## **A high performance compact Wilkinson power divider using GaAs**

The optimized processes are demonstrated and several key parameters are compared for the previous process and optimized process in detail. A Wilkinson power divider is realized using this



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