Concentrator Fiber Optic Communication

Overview

The Active Concentrator is a fiber optic distribution unit used in IEEE 802. 4 compatible networks, providing an active (powered) five megabit per second communication link among stations in an I/A Series fiber optic LAN. 2 mi) for direct. In telecommunications, the term concentrator has the following meanings: In data transmission, a functional unit that permits a common path to handle more data sources than there are channels currently available within the path. Note: Examples of fiber optic concentrators are (a) a fiber optic distribution frame that (i) accepts 3000 fiber optic voice channels from home fiber optic transceivers, (ii). Compound Parabolic Concentrators (CPCs) were introduced from the non-imaging optics into Visible Light Communications (VLCs) in 2012. They currently offer the only streamlined way to solve the light amplification problem when small active-area photodetectors are used.

Article Content

Freeform compound concentrators for indoor optical wireless

Compound Parabolic Concentrators (CPCs) were introduced from the non-imaging optics into Visible Light Communications (VLCs) in 2012. They currently offer the only streamlined way to solve the light

A Novel Fiber-Optic Light Concentrator with Scattering Parts

Finally, we model a fiber-optic probe as an application and evaluate the light concentration characteristics when the concentrator is serially concatenated with a normal optical fiber.

Rectangular Glass Optical Fiber for Transmitting Sunlight in a Hybrid ...

Abstract In this paper, we propose to use glass optical fibers with a rectangular cross-section for the application in a concentrator photovoltaic and daylighting system (CPVD) due to the

Effects of Fabrication Methods on the Performance of Luminescent

In this work, we detail two types of fabrication processes of four polymer optical fibers doped with lumogen dyes. The fiber preforms have been manufactured with two different methods:

Design research and performance analysis of compound

In order to satisfy the need of visible light communication, compound parabolic concentrators are selected as the optical antennas because of their

Design and development of a faceted secondary concentrator for a fiber ...

The objective of this study was to design and develop a secondary concentrator that yielded a minimized peak illuminance on the fiber-optic inlet and achieved uniformity, to avoid

Fiber Optic Daylighting with Concentrating Solar

Fiber optic solar concentrators are necessary for rooftop applications and systems that are built into buildings. All these applications would benefit from

A comparative study of optical concentrators for visible light ...

Given the imminent radio frequency spectrum crunch, Visible Light Communication (VLC) is being proposed as an alternative wireless technology allowing for scalable connectivity to

Novel high-efficiency concentrator for optical fiber communication

As a result, the concentration efficiency of the concentrator was measured as 89%. A novel high-efficiency concentrator based on nonimaging optics has been designed and fabricated with

Eficient White-Light Visible Light Communication with Novel Optical ...

Eficient White-Light Visible Light Communication with Novel Optical Antennas Based on Luminescent Solar Concentrators Marco Meucci, Sandra Doria, Ali Muhammad Umair, Daniele Franchi, Marco

High gain, wide field of view concentrator for optical communications

The field of view and gain of optical concentrators used within free space optical communications systems are constrained by conservation of etendue. In this Letter, consideration of

Comparative analysis of optical concentrators for efficient light ...

This study compares the geometries and simulation results of three optical concentrators—Compound Parabolic Concentrator (CPC), Dielectric Totally Internally Reflecting

Freeform concentrator design for IR wireless-to-fiber link ...

Request PDF | Freeform concentrator design for IR wireless-to-fiber link communications | Airplanes use heavy wired harnesses to provide

Fibre Channel Concentrators/HUBs

The FC-2000 is a 16-port Fibre Channel Arbitrated Loop concentrator. It allows convenient construction of a Fibre Channel loop by providing a centralized point to which all loop devices are connected.

[PSS 21H-7F1B3] Local Area Network

Active devices, such as the Fiber Optic LAN Converter and active concentrator, decrease this communication distance by 1.25 km, each time a signal passes through one, due to retiming delays.

Design and optimization of optical receiving antenna ...

Abstract An advanced optical receiving antenna based on compound parabolic concentrator (CPC) is proposed for indoor visible light communication (VLC). The design of the

Bandwidth limits of luminescent solar concentrators as ...

Luminescent solar concentrators (LSCs) have recently emerged as a promising receiver technology in free-space optical communications due to their inherent ability to collect light from a wide ...

fiber optic concentrator | SpringerLink

A communications system component that multiplexes a number of separate incoming fiber optic communications channels.

The Impact of the Length of Fluorescent Fiber

Fluorophore doped plastic optical fibers can be used to create optical concentrators in receivers for visible light communications, that also act as wide

Concentrator

In telecommunications, the term concentrator has the following meanings: • In data transmission, a functional unit that permits a common path to handle more data sources than there are channels currently available within the path. A concentrator usually provides communication capability between many low-speed, usually asynchronous channels and one or more high-speed, usually synchronous channels. Usually different speeds, codes, and protocols can be accommodated

TCP/IP Hubs / Concentrators

An Ethernet hub or concentrator is a device for connecting multiple twisted pair or fibre optic Ethernet devices together, making them act as a single segment. It works at the physical layer of the OSI

Freeform concentrator design for IR wireless-to-fiber link

Additionally, from the experimental experience, we will describe the optical design strategies permitting designing a compound freeform concentrator to allow optical free space-to-fiber links.

Designing FDDI Concentrators

The Concentrator plays an important role in the Fiber Dis-tributed Data Interface (FDDI) architecture. This application note introduces the concentrator, discusses its applications and describes its structure.

Novel high-efficiency concentrator for optical fiber communication

A novel high-efficiency concentrator based on nonimaging optics has been designed and fabricated with micromachining technique. The shape of the concentrator utilizes compound parabolic concentrator

[PSS 21H-7F7B4] Splitter/Combiner

As shown in Figure 1, the splitter/combiner is designed to interconnect a fault-tolerant pair of Fiber Optic Carrierband LAN Interfaces and a pair of (redundant) active concentrators.

Free-form Compound Concentrators for Optical Wireless Communications

Additionally, from the experimental experience, we will describe the optical design strategies permitting designing a compound freeform concentrator to allow optical free space-to-fiber

Design and optimization of optical receiving antenna ...

Request PDF | On Feb 1, 2020, Xing Peng and others published Design and optimization of optical receiving antenna based on compound parabolic concentrator for indoor visible light communication ...

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