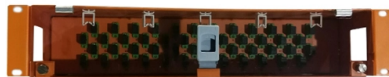


Optical Separator Specifications



AI Overview

Optical separators are advanced sorting systems that detect and separate materials based on color, shape, size, and infrared signatures, achieving high purity and efficiency.

Detection and Sorting Technology Optical separators use monochrome or color cameras to analyze materials by color intensity, shape, size, and other unique characteristics. Some models, like NIR (Near-Infrared) separators, detect materials based on their infrared spectra, enabling separation of plastics, paper, cardboard, and wood with high precision (). Advanced systems can perform in-flight sorting, detecting and separating materials even while moving, which increases sorting speed and purity ().

Material Handling and Efficiency Material size range: Typically from 5 mm to 50 mm for glass or similar scrap (). Separation efficiency: Up to 99.99% depending on material type and contamination level (). Air sorting: Many separators use air jets to remove unwanted materials, ensuring clean separation (). Multi-fraction sorting: Some systems allow separation into multiple fractions in a single stage, based on color, shape, or transparency ().

Hardware Features Durable construction: Designed to handle abrasive materials like glass, with quick-release liners and dust/moisture protection for electronics (). Control interface: High-definition touch screens (e.g., 17-inch) for easy adjustment of sorting parameters (). Customizable settings: Software allows saving separation parameters for different materials and user access levels (worker, engineer, service technician) ().

Applications Optical separators are used in recycling, waste management, and industrial material processing. They can sort PET, PVC, glass, ceramics, metals, and other materials with high accuracy (). NIR-based separators are particularly effective for distinguishing materials with similar visual properties but different chemical compositions ().

Summary Modern optical separators combine camera-based detection, NIR spectroscopy, and air-jet removal to achieve high-speed, high-purity...

Article Content

Beamsplitter Family PDF Asset Page | Keysight

Keysight's polarization beamsplitters are designed to transmit p-polarized light, and reflect or displace s-polarized light. Standard and custom configurations are available for optical instrumentation, laser

Optical Separators | BAS Industrial

With NIRVIS brand optical sorters, we separate raw materials with visible and invisible properties by color, shape and material characteristics with high precision. Our optical sorters are widely used in

Optical Separator: High-Accuracy Sorting Solutions

Find top-rated optical separators for industrial, recycling, and agricultural sorting. Discover high-accuracy, customizable options with verified suppliers. Click to explore reliable solutions now.

Harmonic Separator for Femtosecond Lasers | EKSMA

Harmonic separators or dichroic beamsplitters reflect one wavelength and transmit others. Beamsplitters for 266 nm, 400 nm, 800 nm, 343 nm, 515 nm, 1030 nm.

Beam Splitter Selection Guide

Our beam splitters are made from high grade glass material with laser grade surface flatness & surface quality for tighter tolerance on the splitting ratio.

SP700nm Shortpass Dichroic Mirror: Visible/NIR Beam Separator

Its design is centered on efficiently **transmitting visible and near-red light** while providing **deep rejection of Near-Infrared (NIR) wavelengths**. This makes the SP700nm an indispensable

Optical beam separator / ADSL / for filters

Optical beam separator / ADSL / for filters Beam splitter allowing splitting one incoming light beam into two beams of the same intensity. Diameter 40 mm

Optical separator

Modern photo separators are distinguished by the fact that recognition occurs by color, configuration, shape, etc., while conventional optical separators are sorted

A Technical Overview of Optical Separator Grain: Specifications and ...

Types of Optical Separator Grain An optical grain separator is a high-precision machine used in food processing and agricultural industries to sort grains based on color, size, shape, and other visual

Optical Separator: High-Accuracy Sorting Solutions

Selecting the right optical separator requires evaluating several technical and operational parameters. Begin by analyzing material characteristics: particle size distribution, bulk density, and contamination

Optical separator

The serially produced models of ERGA ReSortika CF optical separators are presented in the table. Custom solutions can be developed according to the technical specifications requirements.

Optical Sorter

Discover how Optical Sorters revolutionize material separation with cutting-edge sensor technology. These advanced sorting machines utilize AI-powered classification, high-resolution imaging, and

Optical Sorting Machines | SORTEX | Bühler Group

Bühler optical sorting machines can sort a wide range of applications like grains, plastics and food. SORTEX uses a range of technologies

Ballistic Separator STT5000 — STADLER Anlagenbau

Find out all information about the areas of application and performance features of the STADLER STT5000 ballistic separator and start your project!

Understanding Optical Specifications

Do you want to know more about the importance of optical specifications? Learn the different types of specifications and their impact on your system at Edmund Optics.

Optical (NIR) Separator

Optical (NIR) Separator Senro supplies optical NIR separators to fully in-house design and control. The purpose of the optical NIR separator is the fully

How Optical Sorting Machines Work And All Their Benefits

A complete guide to optical sorting machines: types, how they work, applications, and future trends in smart sorting.

Optical Sorters | MSS NIR & AI Sorting Equipment | CP

MSS optical sorters use NIR and AI sensors with air ejection. Sort plastics, paper, metals by type and color. Fastest belt speeds at 1,000 FPM.

Ion-optical updates and performance analysis of High energy

The separator performance has been simulated based on the updated beam optics with high-order correction. In this paper, the magnet specifications of the HFRS are first reviewed and

CompoMat G5 Plus Automated Blood Component Separator

Automated Blood Component Separator CompoMat G5 Plus is designed to efficiently and reliably automate the separation of whole blood units into blood components. The system easily adapts to

Optical Beamsplitters | Beamsplitter Selection | Edmund

Find top-quality Beamsplitters for laser systems & more. Shop a variety of beamsplitters at Edmund Optics for precision light splitting needs. [Click Here!](#)

Laser Harmonic Separators with HT | EKSMA Optics

These IBS-coated harmonic separators with backside anti-reflection coating have $T > 99\%$ transmitted wavelength & work for high-power Nd: YAG lasers applications.

Optical Sorter, metal separator, Waste sorting machine

Working principle Optical sorter, also known as photometric sorter, is a device that uses the different light reflection characteristics of materials for sorting. It

Bronneberg Optical Sorting Devices

Bronneberg supplies an extensive range of Optical Separators. Our colour separators offer unrivalled speed, accuracy and ease of operation. Bronneberg's

Tolerancing Optical Systems

Specification of lens wedge using ISO10110 Parks & Kimmel ISO 10110 Optics and Optical Instruments – Preparation of Drawings for Optical Elements and Systems: A users Guide

Optical Sorter

Applications of Waste Optical Sorters Waste optical sorters are versatile and used in various industries to improve material separation efficiency. Common

Optical separator / optical beam / for filters

II-VI Optical Systems fabricates beamsplitters and beam combiners in a variety of sizes and configurations. These include cube, plate, and custom multi-path

Near-infrared sorting for optical and spatial resolution • STEINERT

NEAR-INFRARED SORTING Visibly better detection: optical and spatial resolution of 3 to 8 mm State of the art camera-based NIR technology NIR (near infrared technology) refers to a spectrum in a range

Contact Us

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