ZITHA TECH SPECIALTY CABLES (Pty) Ltd

Plastic Sorting Spectrometer



Overview

The current standard for plastic sorting is near-infrared (NIR) spectrometers that work in the range where black plastic is completely undetectable. “Plastic identification is made possible with near-infrared spectroscopy, which is able to sort a variety of plastics with a high. Our Mobile NIR Spectroscopy Solution combines mobile hardware, data analysis, and material expertise to differentiate a wide range of plastic types, supporting your journey toward a circular economy. The system uses a highly efficient and accurate detection method based on high-speed laser spectroscopy: it identifies the good material in a plastic flake or granulate stream using its specific opto-electronic spectrum and sorts it from various foreign and contaminating materials in just a single. We report the design, implementation and test of a Mid-Infrared spectrometer proof-of-concept that utilizes an uncooled micro-bolometer array, sensitive in the 3–14 µm spectral range, integrated in a conventional optical dispersive spectrometry setup. Such a spectrometer enables instantaneous. Ozirma is an open-source and low-cost sensor that identifies different types of plastic (PE, PVC, PET, PS, etc.), an essential first step in recycling.



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Article Content

NIR Spectrometer for Optical Sorting in Recycling | LLA

The near-infrared line spectrometer combined with an optical multiplexer has a high spectral resolution of 4 nm/pixel, which allows for the evaluation of even the

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