

## Customer Requirement:

Reliably detect the leading edge of pallets in palletizing and depalletizing equipment

## Banner Solution:

PVD100 Pick-to-Light Sensor modified for pallet presence detection

## Why Banner?

**Reliability** – Four beam sensor creates a high-reaching light screen

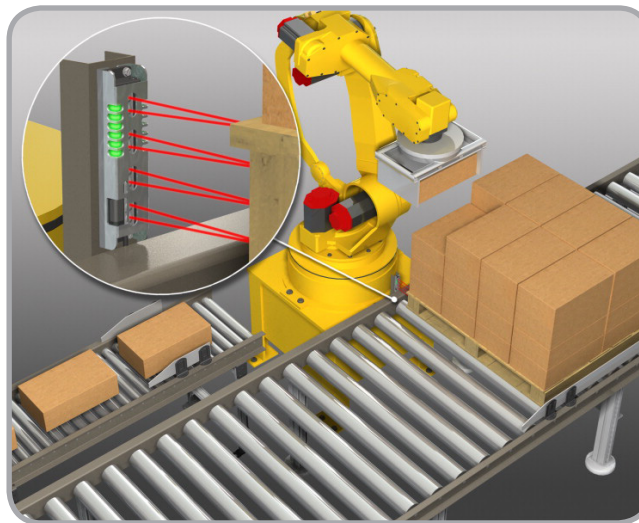
**Cost-effective** – Complete emitter/receiver array in a single component

## Customer Benefits:

**LED Light Display** – High-visibility red and green lights indicate operational mode

**Durability** – Metal enclosure with heavy-duty bracket protects against hazards

## Cost-Effective Pallet Detection Solution for Conveyance Equipment



Modified PVD100 multiple beam array sensor integrated into case palletizer machinery.

## Background

A leading manufacturer of conveying equipment designs and builds high-quality, low-cost conveyance solutions. The pallet equipment they develop is expected to reliably convey, palletize and depalletize thousands of pallets and unit loads annually. This equipment must be able to sense a wide range of different pallet types and sizes to ensure the proper packing and unpacking of pallets and avoid line slow-downs, pallet crashes and collapses.

## Challenge

Single beam retroreflective sensors are commonly used in similar applications. However, the company found that these required frequent adjustments to detect many pallet variants. A multiple beam sensor performed well, but the detection zone was too small to ensure consistent pallet detection. The manufacturer asked Banner Engineering to provide a cost-effective and reliable solution.

## Solution

Banner recommended a modified PVD100, a versatile, easy-to-use and robust light screen capable of reliable operation in challenging conditions. It has a detection height of 100mm with a scanning range of 2m, ideal for pallet detection, even where features are inconsistent from one pallet to the next. Only one PVD100 sensor, a strip of reflective tape and a single power supply per machine was required for the application, limiting expenses and reducing complexity.

The modified PVD100 came ready to operate right out of the box, requiring no setup or adjustments. It features a wide beam pattern, making alignment easy. The sensor has an unobtrusive low-profile form factor, ideal for integration into existing designs. It is housed in a rugged metal enclosure and offers an optional heavy-duty mounting bracket.



PVD100 sensor with heavy-duty protective bracket

### PVD100 Features:

- Easy to mount one-component system
- Wide beam pattern provides easy alignment
- Compact size: 30 mm wide x 15 mm deep x 100 mm length (1.2" x 0.6" x 4.0")
- DIP switch selectable NPN or PNP output
- Large indicator lights on either side of the metal housing
- Heavy-duty protective brackets available
- Model number: PVD100-30723

### More on [bannerengineering.com](http://bannerengineering.com):

- [Standard PVD Product Overview](#)