



Vision Sensing in Caustic Washdown Environments

More Sensors. More Solutions. It's the foundation for Banner Engineering's continuous development and delivery of the broadest offering of sensors available. Whether it's basic or vision sensing, advanced measurement and inspection, wireless networks or machine safety, Banner has the correct sensing product to solve your sensing challenge.



Rugged Vision Sensors are Reliable in Harsh Environments

The sensitive circuitry of a traditional vision system is not suited to the harsh food processing environment—until now! Banner Engineering introduces a new line of machine vision sensors and vision accessories uniquely suited to the high-pressure washdown and caustic detergents used in food processing plants.

With the IP68-rated, stainless steel *PresencePLUS® Pro*, manufacturers now have a rugged sensor option capable of detailed, high-quality inspections that only a vision sensor can perform. The 316-grade stainless housing is easy to clean, less subject to pitting and is able to withstand the demands of hot, high-pressure sprays, as well as caustic, acid-based detergents. Additionally, Banner helps you complete the system with ruggedized accessories from brackets to lighting in a variety of configurations.

Food processing is a highly regulated industry with some of the highest standards for manufacturing hygiene. The *PresencePLUS Pro* can help manufacturers meet and exceed these standards with high quality inspections.

Now Available!



**Banner's 2008-2009
Sensors Catalog**

To request Banner's catalogs, visit
[www.bannerengineering.com/
2008SENSORS](http://www.bannerengineering.com/2008SENSORS)

**PresencePLUS® —
Sensing is now
smarter**



The new generation of Banner vision solutions offers advanced features, higher performance, easier setup and operation, rugged design, and Banner reliability and support.



Banner provides free software and firmware upgrades and the industry's largest worldwide support team.



Banner's vision sensors offer a complete array of gray scale, color, IP68-rated, high-resolution and bar code systems.

Tel: 1.888.373.6767



more sensors, more solutions

Banner Engineering Corp.
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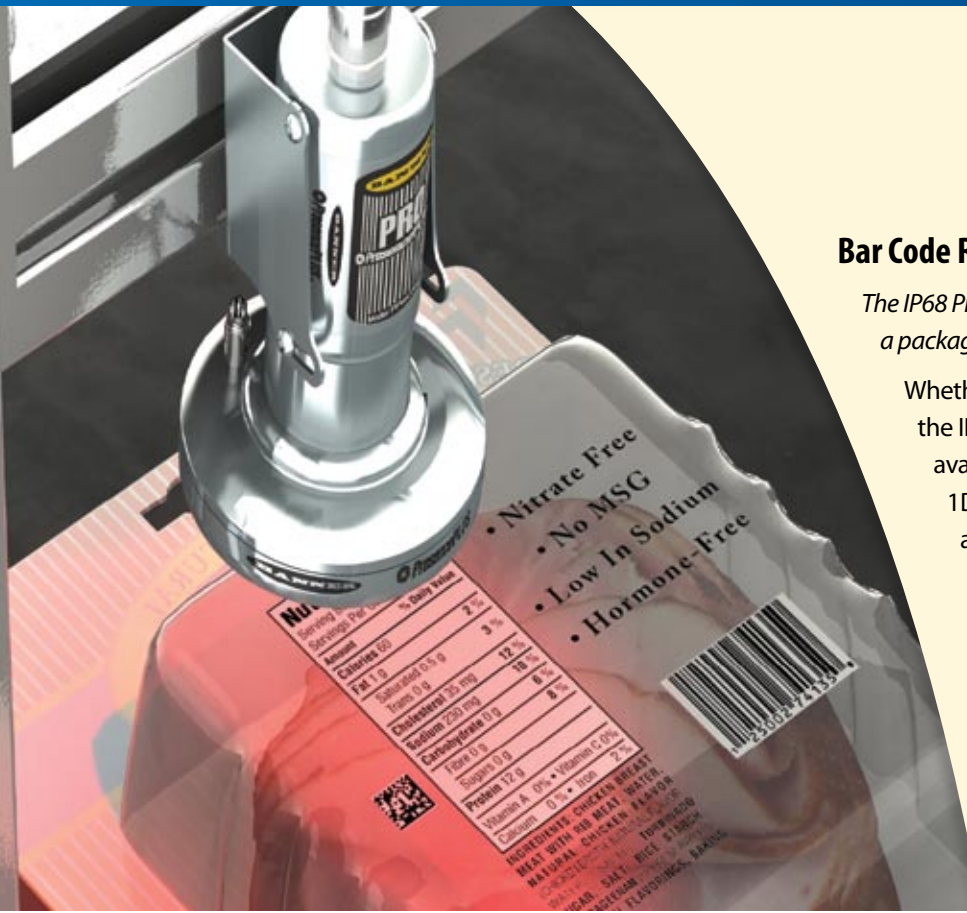
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Applications

Bar Code Reader Verifies Packaging Label in Challenging Conditions

The IP68 PresencePLUS® Pro Bar Code Reader checks the nutrition facts on a label applied to the top of a package of meat, after it leaves the sealing die.

Whether it is meat, poultry, cheese, fish, seafood or produce that you need to package, the IP68 PresencePLUS Pro remote camera is the most dependable, simple-to-use camera available on the market. The IP68 PresencePLUS Pro accurately reads and grades 2D and 1D bar codes in the toughest environments with challenging processing, packaging and labeling needs—even when conditions and codes are less than ideal. Whether for production traceability of direct-marked manufactured components, or to verify product lots for consumer goods, the IP68 Pro with the Bar Code Reader is engineered to offer the highest read rates in low contrast/poor visibility conditions, or where marked bar codes have degraded. The stainless steel IP68-rated housing can withstand caustic cleaning solutions, and its smooth surface allows for easy washdown, reducing microbial buildup.



Rugged PresencePLUS® Pro Verifies Packaging Accuracy

The IP68 PresencePLUS® Pro verifies that the lid and packaging of the ice cream container match the ice cream flavor.

Food packaging error can lead to large scale returns of good quality product to the manufacturer, or in the worst case, public health endangerment due to food allergies.

Improve the accuracy of package verification with the IP68 PresencePLUS Pro with its superior pattern matching ability. Get the improved inspection quality of a vision sensor in a rugged, stainless housing that is ideal for the requirements of washdown environments.



Wet Conditions are no Challenge for IP68 PresencePLUS® Sensors

The rugged PresencePLUS® Pro stainless steel camera inspects for sealed cap and correct fill level on clear PET bottles as they pass on a high-speed conveyor in a wet environment.

The PresencePLUS Pro stainless remote vision sensor offers flexibility and power with both gray scale and color capabilities.

The powerful controller provides the entire set of vision, location and analysis tools for high quality inspections, while the rugged IP68-rated remote sensor can be used alone or with extremely bright, LED-based lighting available in all visible colors. These lights deliver bright and even illumination while withstanding hot, high-pressure sprays and caustic detergents.



Washdown Environments

Models



PROII Controllers, 10-30V dc

Model	PPROCTL	PPROCTL1.3	PPROCTLC	Add premium tools to model (example, PPROCTL-BCBDOC)		
Resolution	640 x 480 Gray Scale	1280 x 1024 Gray Scale	752 x 480 Color & Gray Scale	BC = Bar Code Reader	BD = Bead Tool	OC = OCR/OCV
				BCBD = Bar Code Reader & Bead Tool		
				BCOC = Bar Code Reader & OCR/OCV		
				BDOC = Bead Tool & OCR/OCV		
				BCBDOC = Bar Code Reader, Bead Tool & OCR/OCV		
IP68 Stainless Steel Pro Camera Model Numbers*				Ring Light	Window**	Housing
	PPROCAMSSC-G	PPROCAM1.3SSC-G	PPROCAMSSC-G	Lens Cover (No Light)	Glass	316 Stainless Steel
	PPROCAMSSC-P	PPROCAM1.3SSC-P	PPROCAMSSC-P		Plastic	
	PPROCAMSSR-G	PPROCAM1.3SSR-G		Red	Glass	
	PPROCAMSSR-P	PPROCAM1.3SSR-P			Plastic	
	PPROCAMSSI-G	PPROCAM1.3SSI-G		Infrared	Glass	
	PPROCAMSSI-P	PPROCAM1.3SSI-P			Plastic	
	PPROCAMSSB-G	PPROCAM1.3SSB-G		Blue	Glass	
	PPROCAMSSB-P	PPROCAM1.3SSB-P			Plastic	
	PPROCAMSSG-G	PPROCAM1.3SSG-G		Green	Glass	
	PPROCAMSSG-P	PPROCAM1.3SSG-P			Plastic	
	PPROCAMSSW-G	PPROCAM1.3SSW-G	PPROCAMSSW-G	White	Glass	
	PPROCAMSSW-P	PPROCAM1.3SSW-P	PPROCAMSSW-P		Plastic	

* Models listed are made from 316 stainless steel. For lighter nickel-plated aluminum IP68 cameras, remove an S from the model number (example, PPROCAMSC-G).

** Windows are factory replaceable, contact factory at 1-888-373-6767.

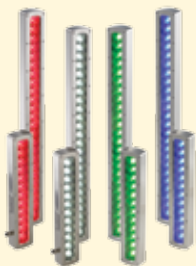
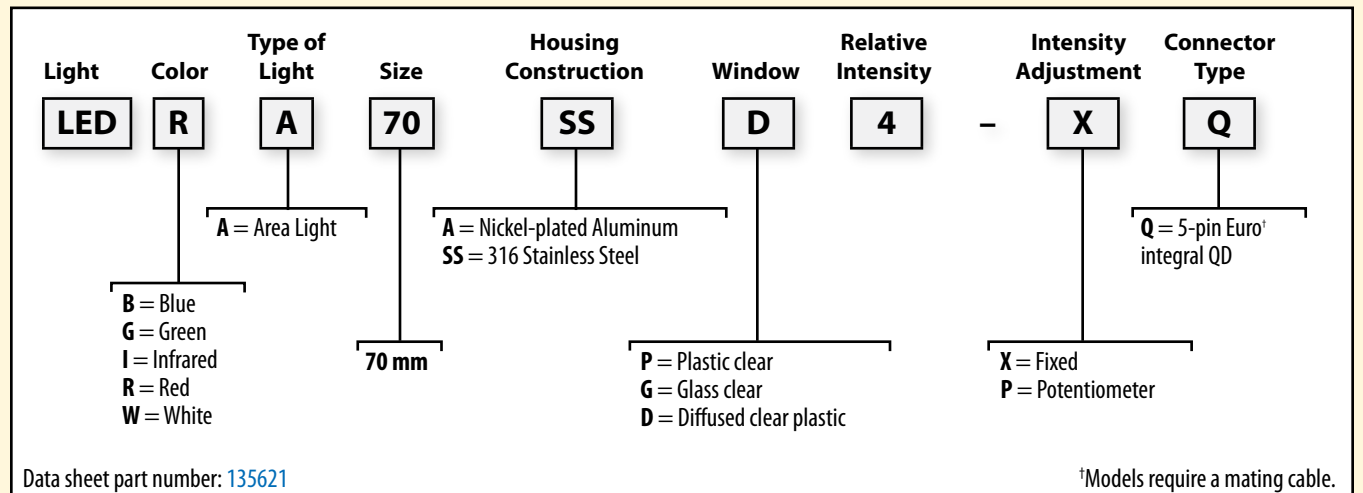


LED High-Intensity IP68 Sealed Area Light Model Key, 24V dc

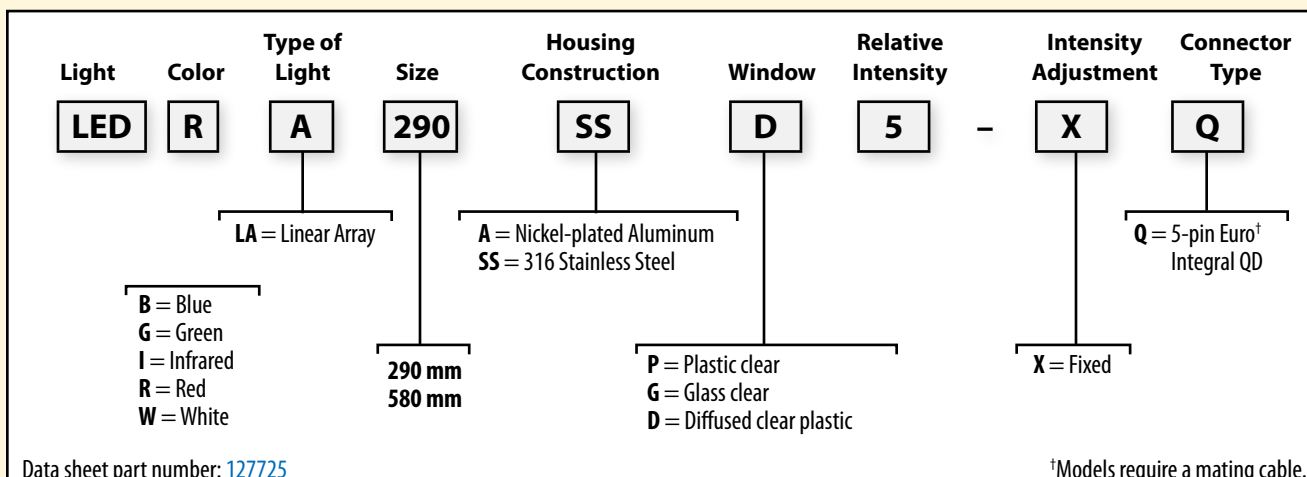


Area Lights

- Illuminates specific surface angles
- Reflects glare from shiny surfaces away from camera
- Creates shadows to detect changes in depth



LED IP68 Sealed Linear Array Model Key, 24V dc



Linear Array Lights

- Maintenance-free LED illumination of large objects from far away
- Provides super high-intensity illumination of large areas
- Withstands washdown (rated IP68)



Vision Sensing in Caustic Washdown Environments



SMBLASRA
for use with
Linear Array
Lights

Stainless Steel IP68 Brackets



SMBPPSU
for use with IP68
PresencePLUS® Pro
Camera



SMBASCM
for use with Area Lights
(shown with optional
SMBPPK6 mounting kit)

IP68 Polarizing Filter Kits

Model	Description	Part Number
LEDLAPFK290S	Polarizing filter kit for 290 mm Linear Array Lights	79818
LEDLAPFK580S	Polarizing filter kit for 580 mm Linear Array Lights	79817
LEDAPFK70S	Polarizing filter kit for 70 mm IP68 High-Intensity Area Lights	79820
LEDRPFK90	Polarizing filter kit for 90 mm IP68 Ring Lights	76799



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