The table below provides a list of the ESP Algorithms which are available for use with Williamson's multi-wavelength sensors. Each algorithm is developed for a specific application. A few points about the ESPs are:

- Each sensor can include up to 8 ESP algorithms (previously the maximum was 4 ESPs per sensor).
- The first algorithm listed in the Group is the factory default setting. Williamson will pre-configure the sensor to another ESP algorithm if requested at the time of the order.
- ESP algorithms can only be used with sensors that have the specified nominal wavelength.

D - ESP Algorithms					
Part No.	**Price**	**Nominal Wavelength**	**Application / Material**	**ESP Algorithms**	**Application Notes**
ESPA2 (replaces ESPA1, A4, A6, A7, A9, A11, 12, A14)		2um	Aluminum Extrusion and Aluminum Forging NOTE: Each Billet Measurement is made outside the furnace.	Press Exit 1	Aluminum Profile as it exits the press. Compensates for alloy changes and misalignment.
				Cut Billet	Face of Aluminum Billet cut by a saw. For temperatures above 850°F/450°C, Side of Billet measurement is recommended.
				Shear Billet	Face of Aluminum Billet that has been sheared.
				Side Billet	Cast Surface on the Side of an Aluminum Billet.
				Scalp Billet	Scalped Surface on the Side of an Aluminum Billet.
				Quench	Aluminum Profile in quench zone where temperatures are greater than 400°F/200°C. Not for heavy water quench.
				Press FullFOV	Aluminum Profile as it exits the press. May be used instead of Press Exit 1 for some hard alloys or presses with long tunnels. This ESP REQUIRES a full field of view.
ESPA15		1.5um	Aluminum Extrusion	Side Billet	Cast Surface on the Side of a High-Temperature Aluminum Billet. This measurement is made outside of the furnace.
ESPA3		2um	Aluminum Rolling Mills	RolledSurface	Rolled Aluminum Strip and Plate.
				Side of Coil	Side of Coiled Aluminum Strip.
				Top of Ingot	Top of Ingot at the entry to the Reversing Mill. 1000 and 3000 Series alloys require an ESP offset setting of -0.040 and +0.080, respectively. No offset required for all other Alloys
				Caster Exit	Continuously Cast Aluminum Surface.
ESPA5		2um	Aluminum Rod/ Bar	Cast Surface	Cast surface between caster and 1st rolling stand.
				Rolled Bar	Rolled surface. Tolerates misalignment.
ESPC1		1.5um	Copper–Vacuum Brazing	Copper	Vacuum Brazing of Copper
ESPC2		2um	Copper, Brass, & Aluminum Billets for Forging Applications.	Cu-Al-Brass	Side of Copper, Brass and Aluminum Billets. This measurement is made outside of the furnace.
ESPC3		1.5um	Copper Rod, Bar, and Strip (HRM, Caster)	Cast Surface	Cast surface between caster and 1st rolling stand
				RolledSurface	Rolled Surface. Tolerates misalignment.
				Extruded Cu	Copper Extrusion
ESPG1		1.5um	Glass Mold (Forming)	Mold-Plunger	For measurement of Mold and Plunger used to form glassware. Measures Steel, Stainless Steel, and Chrome Materials (requires 100ms dwell time)
ESPM1		2um	Magnesium Strip	Magnesium	For measurement of magnesium surfaces
ESPS1		2um	Steel Mill - Hot Dip Line, HRM, and Quench/Showers	Galvanneal	For galvanneal strip near the galvanneal furnace
				Gal Turn Roll	For Galvanize, Galvanneal, and Galvalume at or near the turn roll
				Annealing	For uncoated, pickled or oxide-free steel strip in a controlled (oxygen-free) atmosphere
				HRM Coiler	For Steel Strip at the coiler in Hot Rolling Mills where there are issues with emissivity variation, water and steam interference.
ESPS3 (Replaces ESPS2)		1.5um	Steel Mill - HRM and Annealing Line Pickled Steel	Annealing	For Mild Steel and High Strength Alloy Strips w/ emissivity < 0.5
				Galvanneal	For galvanneal strip above 825°F / 435°C.
				Stainless Stl	For Stainless Steel Alloys – may also be used for mild steel strip.
				High Ni-Si	For High Nickel and High Silicon Alloy Strips.
ESPS4		2.75um	Steel Bearing Assembly	Steel Bearing	High Strength Alloys – Interference fit assembly.
ESPS6		1.5um	Steel Tube & Bar Mills – High Temperatures	Steel Tube	For Mild and High Strength Steel Alloy Tubes w/ emissivity < 0.5
				Zinc Tube	For Zinc-coated Tubes
				SS Tube	For Stainless Steel Tubes – may also be used for mild steel tubes.
				High Ni/Si	For High Nickel and High Silicon Alloy Tubes
ESPS7		2um	Steel Tube & Bar Mills – Low Temperatures (T < 700 F / 375 C)	Steel Tube	For Mild Alloy Tubes w/ emissivity < 0.5
				Zinc Tube	For Zinc-Coated Steel Tubes
				ShotBlastTube	For Shot-Blasted Steel Tubes
ESPS9		2um	Motor Rotor Assembly	Motor Rotor	Motor Rotor Interference Fit Assembly – Laminated Silicon Steel.