Series 791 Connectors for Space Flight

Developed for the Orion spacecraft, the Series 791 connector is a high density, lightweight, high performance connector ideal for space flight applications. These connectors are available with NASA-grade screening and vacuum bakeout for high reliability space programs.

1. **Find the right modification code in the table below.**

2. **Add the "Mod Code" to the connector part number.**
    Example: 791-003SH-66MP-**429C**

Is the Series 791 qualified and approved for space flight?

Yes. The connectors in this catalog are "good to go" for space flight. Zinc-nickel plated connectors should not be used for space applications. Electroless nickel is recommended.

Do Series 791 connectors meet outgassing requirements?

Connectors must be vacuum baked to guarantee compliance with outgassing limits established by NASA and military space programs. The requirements are 1.0 % Total Mass Loss (TML) and 0.1% Collected Volatile Condensible Material (CVCM). ASTM E595 defines the test procedure.

What is vacuum bakeout?

Connectors are placed in a special oven for 24 hours at +125°C and a vacuum of 10^{-6} Torr.

Are Series 791 connectors non-magnetic?

Series 791 connectors meet the 2.0μ magnetic permeability requirement of EIA-364-54. Additional residual magnetism screening is available on request.

Space Grade Modifications Codes			
Modification Code	**NASA Screening Level**		**Vacuum Bakeout 24 hours +125°C**
	Level 1 Highest Reliability	**Level 2 High Reliability**	
429		●	
429A		●	●
429B	●		
429C	●		●
186M			●

NASA Screening Requirements (EEE-INST-002 Table 2C)		
Inspection/Test	**NASA Screening Level**	
	Level 1 Highest Reliability	**Level 2 High Reliability**
Visual Inspection	100% 10X magnification	100% 10X magnification
Mechanical Inspection	2 connectors 10X magnification	2 connectors 10X magnification
DWV/IR	2 connectors	2 connectors
Contact Separation Force (Connectors with non-removable contacts)	2 connectors	Not required
Mating and Unmating Force	2 connectors	Not required
Hermeticity (hermetic connectors only)	100%	100%
Vacuum Bakeout (Optional, depends on Mod code)	100%	100%