

# LiteSteel™ beam 50 ksi W-beam Comparison Tables

These tables show the applicable LSB and 50 ksi wide-flange beams for various loads from 0 lbs/ft to 2000 lbs/ft for a variety of spans. The tables cover the use of various weights of hot-rolled section. W8 and W10 sections can be found in the first table and W12 and W14 sections in the second table.

- Total allowable uniform load for hot-rolled shape is the minimum of shear, bending moment, and  $L/240$  deflection limit
- Uniform load was calculated using standard uniform loading equations for simple beams
- Allowable bending moment capacities for hot-rolled sections were calculated per AISC Steel Construction Manual Specification Section F
- Allowable shear capacities for hot-rolled sections were calculated per AISC Steel Construction Manual Specification Section G
- Moments of Inertia for hot-rolled sections are from AISC Steel Construction Manual Table 1-1
- Modulus of elasticity for hot-rolled steel is assumed to be 29,000 ksi
- Yield Strength is equal 50 ksi
- LSB bearing capacities have not been taken into consideration. See sections 2.4 and 2.6 for bearing and stiffener requirements
- Reactions should never exceed stiffener capacities for the appropriate bearing length
- All LiteSteel beams are single unless “BB” is shown which indicates two members are required



**LiteSteel Technologies America LLC**

P.O. Box 577

Troutville, VA 24175

Tel: (540) 992-1600

Fax: (540) 992-5998

E-mail: [sales@LiteSteelbeam.com](mailto:sales@LiteSteelbeam.com)

Website: [www.LiteSteelbeam.com](http://www.LiteSteelbeam.com)

Comparison Wide Flange 50ksi



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Allowable PLF 0 100 200 300 400 500 600 700 800 900 1000 1200 1400 1600 1800 2000