

Lumber Dimensions

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Standard Dimensions of Hardwood Lumber

Because of their higher cost and scarcity relative to softwoods, hardwoods are often cut to whatever widths and lengths are most convenient and cost-effective, and the lumber is marketed in "random" widths and lengths. There is, however, some level of standardization in that boards are cut to standard lengths of 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, and 16 feet. Although standard widths are not established, the hardwood lumber grades do specify minimum widths for each grade as follows:

Firsts	6 inches
Seconds	6 inches
Selects	4 inches
No. 1, 2, 3A, 3B Common	3 inches

Hardwood lumber is generally sold in the U. S. in the following standard thicknesses.

Rough Dimension	Surfaced 1 Side (S1S)	Surfaced 2 sides (S2S)
3/8"	1/4"	3/16"
1/2"	3/8"	5/16"
5/8"	1/2"	7/16"
3/4"	5/8"	9/16"
1"	7/8"	13/16"
1-1/4"	1-1/8"	1-1/16"
1-1/2"	1-3/8"	1-5/16"
2"	1-13/16"	1-1/34"
3"	2-13/16"	2-3/4"
4"	3-13/16"	3-3/4"

Note: A "quarter" system is commonly used in the hardwood lumber industry when referring to thickness. 4/4 refers to a 1 inch thick board, 6/4 is a 1-1/2 inch thick board, 8/4 is a 2 inch thick board, and so on. This convention is not normally used for softwood lumber.

Standard Dimensions of Softwood Construction Lumber

Softwood construction lumber is generally machined to lengths that are multiples of 2 feet. The stated length equals the actual length, unlike width and thickness which are typically given in "nominal" dimensions that are somewhat larger than actual dimensions. Width ranges from 2 to 16 inches nominally. Lumber may be categorized according to thickness as follows:

Boards	less than 2 inches in nominal thickness
Dimension	nominal thickness ranging from 2 inches up to, but not including, 5 inches
Timbers	5 or more inches in nominal thickness in the least dimension

Dimension lumber and boards may be surfaced green or dry, depending on the manufacturer. Timbers are generally surfaced while still green. Green lumber dimensions for thickness and width are closer to the nominal dimensions than the dry lumber dimensions. When a piece of green lumber is surfaced to the "standard" green size, it will shrink to approximately the standard dry size as it dries down to about 15 percent moisture content. (The American Softwood Lumber Standard defines dry as a moisture content of 19 percent or less with an average of 15 percent.) For example, a board that has a nominal thickness of 1 inch has a standard green thickness of 25/32 inch and a standard dry thickness of 3/4 inch. The following table provides an overview of nominal, dry, and green dimensions for softwood construction lumber:

Thickness (inches)			Width (inches)		
nominal	dry	green	nominal	dry	green
1	3/4	25/32	2	1-1/2	1-9/16
1-1/4	1	1-1/32	3	2-1/2	2-9/16
1-1/2	1-1/4	1-9/32	4	3-1/2	3-9/16
2	1-1/2	1-9/16	5	4-1/2	4-5/8
2-1/2	2	2-1/16	6	5-1/2	5-5/8
3	2-1/2	2-9/16	7	6-1/2	6-5/8
3-1/2	3	3-1/16	8	7-1/4	7-1/2
4	3-1/2	3-9/16	9	8-1/4	8-1/2
4-1/2	4	4-1/16	10	9-1/4	9-1/2
5+	1/2" less	1/2" less	11-16	3/4 " less	1/2" less

Note: Values under headings "dry" and "green" represent minimum dressed dimensions.