

## Flash unit Guide Number calculations

**For ISO/ASA 100 speed film only**

Guide No. divided by f/Stop equals Distance

$$100 / 8 = 12.5 \text{ ft}$$

Guide No. divided by Distance equals f/Stop

$$100 / 12.5 = f / 8$$

**For ISO/ASA other than 100 speed film**

**Guide No. times Film speed factor, divided by f/Stop equals Distance**

**Guide No. times Film speed factor, divided by Distance equals f/Stop**

Increasing the ISO film speed by a factor of 4 will double the guide number

When film speed doubles, the guide number changes by a factor of 1.4

when film speed is halved, the guide number changes by a factor of 0.7

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Distance Conversion chart for Flash Guide No. <b>119</b>											
f/Stop		1	2	4	8	16	32	64	3.5	5.6	7
ISO/ASA	Factor										
50	0.71	84.49	42.25	21.12	10.56	5.28	2.64	1.32	24.14	15.09	12.07
100	1	<b>119.00</b>	<b>59.50</b>	<b>29.75</b>	<b>14.88</b>	<b>7.44</b>	<b>3.72</b>	<b>1.86</b>	<b>34.00</b>	<b>21.25</b>	<b>17.00</b>
200	1.4	166.60	83.30	41.65	20.83	10.41	5.21	2.60	47.60	29.75	23.80
400	2	238.00	119.00	59.50	29.75	14.88	7.44	3.72	68.00	42.50	34.00

Distance Conversion chart for Flash Guide No. <b>100</b>											
f/Stop		1	2	4	8	16	32	64	3.5	5.6	7
ISO/ASA	Factor										
50	0.71	71.00	35.50	17.75	8.88	4.44	2.22	1.11	20.29	12.68	10.14
100	1	<b>100.00</b>	<b>50.00</b>	<b>25.00</b>	<b>12.50</b>	<b>6.25</b>	<b>3.13</b>	<b>1.56</b>	<b>28.57</b>	<b>17.86</b>	<b>14.29</b>
200	1.4	140.00	70.00	35.00	17.50	8.75	4.38	2.19	40.00	25.00	20.00
400	2	200.00	100.00	50.00	25.00	12.50	6.25	3.13	57.14	35.71	28.57

Distance Conversion chart for Flash Guide No. <b>150</b>											
f/Stop		1	2	4	8	16	32	64	3.5	5.6	7
ISO/ASA	Factor										
50	0.71	106.50	53.25	26.63	13.31	6.66	3.33	1.66	30.43	19.02	15.21
100	1	<b>150.00</b>	<b>75.00</b>	<b>37.50</b>	<b>18.75</b>	<b>9.38</b>	<b>4.69</b>	<b>2.34</b>	<b>42.86</b>	<b>26.79</b>	<b>21.43</b>
200	1.4	210.00	105.00	52.50	26.25	13.13	6.56	3.28	60.00	37.50	30.00
400	2	300.00	150.00	75.00	37.50	18.75	9.38	4.69	85.71	53.57	42.86

Distance Conversion chart for Flash Guide No. <b>200</b>											
f/Stop LOW		1	1.8	2	3.5	4	4.5	5.6	7	8	9
ISO/ASA	Factor										
50	0.71	142.00	78.89	71.00	40.57	35.50	31.56	25.36	20.29	17.75	15.78
100	1	<b>200.00</b>	<b>111.11</b>	<b>100.00</b>	<b>57.14</b>	<b>50.00</b>	<b>44.44</b>	<b>35.71</b>	<b>28.57</b>	<b>25.00</b>	<b>22.22</b>
200	1.4	280.00	155.56	140.00	80.00	70.00	62.22	50.00	40.00	35.00	31.11
400	2	400.00	222.22	200.00	114.29	100.00	88.89	71.43	57.14	50.00	44.44

**Chart 5**

Distance Conversion chart for Flash Guide No. <b>200</b>											
f/Stop High		4.5	5.6	7	8	9	11	16	32	64	128
ISO/ASA	Factor										
50	0.71	31.56	25.36	20.29	17.75	15.78	12.91	8.88	4.44	2.22	1.11
100	1	<b>44.44</b>	<b>35.71</b>	<b>28.57</b>	<b>25.00</b>	<b>22.22</b>	<b>18.18</b>	<b>12.50</b>	<b>6.25</b>	<b>3.13</b>	<b>1.56</b>
200	1.4	62.22	50.00	40.00	35.00	31.11	25.45	17.50	8.75	4.38	2.19
400	2	88.89	71.43	57.14	50.00	44.44	36.36	25.00	12.50	6.25	3.13