

特性係数法による降雨強度式

$$I_N = \frac{a'}{\sqrt{t} + b} I_N^{60}$$

N : 確率年

I_N^{10} : N年確率における10分間降雨量(mm/h)

I_N^{60} : N年確率における60分間降雨量(mm/h)

β_N^{10} : N年確率における10分間と60分間降雨量の比(—)

I_N : N年確率における降雨強度式(mm/h)

t : 降雨継続時間(min)

確率雨量強度式算定表

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[令和4年まで]

| N(年) | I_N^{10} | I_N^{60} | $\beta_N^{10} = \frac{I_N^{10}}{I_N^{60}}$ | $\sqrt{60} - \sqrt{10} \beta_N^{10}$ | $b = \frac{\sqrt{60} - \sqrt{10} \beta_N^{10}}{\beta_N^{10} - 1}$ | $a' = b + \sqrt{60}$ | $I_N = \frac{a'}{\sqrt{t} + b} \quad I_N^{60}$ |
|------|------------|------------|--|--------------------------------------|---|----------------------|--|
| 200 | 160.8 | 94.4 | 1.703 | 2.361 | 3.358 | 11.104 | $I = \frac{1,048}{\sqrt{t} + 3.358}$ |
| 150 | 157.9 | 92.1 | 1.714 | 2.326 | 3.258 | 11.004 | $I = \frac{1,013}{\sqrt{t} + 3.258}$ |
| 100 | 153.9 | 88.9 | 1.731 | 2.272 | 3.108 | 10.854 | $I = \frac{965}{\sqrt{t} + 3.108}$ |
| 70 | 150.2 | 86.0 | 1.747 | 2.221 | 2.973 | 10.719 | $I = \frac{922}{\sqrt{t} + 2.973}$ |
| 50 | 146.6 | 83.2 | 1.762 | 2.174 | 2.853 | 10.599 | $I = \frac{882}{\sqrt{t} + 2.853}$ |
| 30 | 141.0 | 78.8 | 1.789 | 2.089 | 2.648 | 10.394 | $I = \frac{819}{\sqrt{t} + 2.648}$ |
| 20 | 136.3 | 75.2 | 1.813 | 2.013 | 2.476 | 10.222 | $I = \frac{769}{\sqrt{t} + 2.476}$ |
| 15 | 132.8 | 72.6 | 1.829 | 1.962 | 2.367 | 10.113 | $I = \frac{734}{\sqrt{t} + 2.367}$ |
| 10 | 127.6 | 68.7 | 1.857 | 1.874 | 2.187 | 9.933 | $I = \frac{682}{\sqrt{t} + 2.187}$ |
| 5 | 117.7 | 61.5 | 1.914 | 1.693 | 1.852 | 9.598 | $I = \frac{590}{\sqrt{t} + 1.852}$ |
| 3 | 109.0 | 55.4 | 1.968 | 1.523 | 1.573 | 9.319 | $I = \frac{516}{\sqrt{t} + 1.573}$ |
| 2 | 100.5 | 49.4 | 2.034 | 1.314 | 1.271 | 9.017 | $r = \frac{445}{\sqrt{t} + 1.271}$ |