

WEPD – Type I [94, 47, 16]

This is a database of known weight enumerator parameters for singly-even binary self-dual [94, 47, 16] codes.

The possible weight enumerators of a singly-even binary self-dual [94, 47, 16] code are given in [3] as

$$\begin{aligned}W_{94,1} &= 1 + 2\alpha x^{16} + (134044 - 2\alpha + 128\beta)x^{18} \\ &\quad + (2010660 - 30\alpha - 896\beta)x^{20} + \dots, \\W_{94,2} &= 1 + 2\alpha x^{16} + (134044 - 2\alpha + 128\beta)x^{18} \\ &\quad + (2018852 - 30\alpha - 896\beta)x^{20} + \dots, \\W_{94,3} &= 1 + 2\alpha x^{16} + (134044 - 2\alpha + 128\beta)x^{18} \\ &\quad + (2190884 - 30\alpha - 896\beta)x^{20} + \dots,\end{aligned}$$

where α, β .

See the link below for a list of known values of (α, β) for $W_{94,1}$. It is unknown whether or not a code with weight enumerator $W_{94,2}$ or $W_{94,3}$ has been reported.

- [W_{94,1} known parameters](#) (from [1–3])

References

- [1] J. Gildea, A. Korban, A. M. Roberts, and A. Tylyshchak. Binary self-dual codes of various lengths with new weight enumerators from a modified bordered construction and neighbours. *Adv. Math. Commun.*, 2022. doi: [10.3934/amc.2022021](#).
- [2] J. Gildea, A. Korban, A. M. Roberts, and A. Tylyshchak. Extremal binary self-dual codes from a bordered four circulant construction. *Discrete Math.*, 346(8), 2023. doi: [10.1016/j.disc.2023.113425](#).
- [3] M. Harada, M. Kiermaier, A. Wassermann, and R. Yorgova. New binary singly even self-dual codes. *IEEE Trans. Inform. Theory*, 56(4):1612–1617, 2010. doi: [10.1109/TIT.2010.2040967](#).