let the target be t, there's a randomized $O(t \log t)$ algorithm for subset sum to compute the answer mod any prime p [1]. choose $\log_U ans$ random primes and merge the results by Chinese remainder theorem (or choose a single large prime $\approx ans$). ans may be very large $(2^{\Theta(n)})$.

References

[1] Ce Jin and Hongxun Wu. A simple near-linear pseudopolynomial time randomized algorithm for subset sum. *arXiv preprint arXiv:1807.11597*, 2018.